

# **Pretreatment Audit Report**

**City of Helena, MT-0022641**

**Helena, MT**

**September 11, 2017 – September 13, 2017**



**Prepared by:**

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**U.S. Environmental Protection Agency, Region 8  
Pretreatment Program (8P-W-WW)**

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## Pretreatment Audit Summary Table

City of Helena Pretreatment Audit Report  
MT-0022641  
September 11, 2017 through September 13, 2017

Pretreatment Audit Findings	Pretreatment Requirement and Corrective Action
<i>Section 3.0 – Resources</i>	
<p>1. Based on an EPA’s evaluation, it appears that the City of Helena has adequate resources, including the staffing organization and finances to implement the Pretreatment program. However, based on review of the Pretreatment records, the current Pretreatment Coordinator is not implementing the Pretreatment program adequately or devoting the 0.3 FTE as reported in the annual Pretreatment Report.</p> <p>The Pretreatment Coordinator does not meet the “qualified personnel” criteria in 40 CFR 403.8(f)(3) and based on conversations during the audit, is not interested in implementing the programmatic activities of the Pretreatment program.</p> <p>This lack of commitment to the City of Helena’s Pretreatment program is reflected in the quality of the Pretreatment records, as identified in Section 8.0 of this report and in the sampling and inspection field activities. The POTW staff devoted to the field programmatic activities of the Pretreatment program (sampling and inspections) are not producing reports and data expected of qualified Pretreatment personnel. It does not appear that the staff are properly trained to conduct effective facility inspections or representative and defensible control authority monitoring. These resources, qualifications, and commitment to implementing the Pretreatment program were also identified in a Pretreatment audit conducted by the EPA in July 14-16, 2009.</p>	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.8(f)(3)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Ensure qualified personnel carry out the authority and procedures of the Pretreatment program and provide the EPA with a staffing plan that includes an evaluation of the City of Helena’s commitment to the Pretreatment program and to ensure it adequately implements all programmatic activities.</p>
<i>Section 4.0 – Municipal Ordinance and Intergovernmental Agreements</i>	
<p>2. Based on the EPA’s evaluation of the City of Helena’s municipal ordinance, the SIU definition, Best Management Practices enforcement, and specific prohibition for toxic gases, vapors and</p>	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR 403.8(f)(1)</p> <p><b><u>Corrective Action Item</u></b></p>

<p>fumes need to be updated to provide clarity and to strengthen the City's authority to implement the Pretreatment program.</p>	<p>Update the current municipal ordinance during the next revision:</p> <ul style="list-style-type: none"> <li>• Significant Industrial User (SIU) definition found in §6-4-4 – The EPA recommends the City replace “any wastewater user” in the SIU definition with “any industrial user”. Wastewater User is not defined in the Pretreatment Ordinance.</li> <li>• Best Management Practices (BMP) are not currently established in §6-4-7(B) of the municipal ordinance as local limits or Pretreatment Standards. The City needs to add this language to ensure the BMPs are enforceable.</li> <li>• Toxic vapors, fumes specific prohibition found in §6-4-5(C)11 of the municipal ordinance is not equivalent with the Federal Regulations. The specific prohibition for toxic vapors or fumes found in the Pretreatment Regulations, 40 CFR 403.5(b)(7) state the following: “Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems.”</li> <li>• Enforcement authority to immediately halt actual/threatened discharge provisions, as required in 40 CFR Part 403.8(f)(1)(vi)(B) of the Pretreatment Regulations.</li> </ul>
<p>3. The VA hospital, located on the Fort Harrison military base, discharges non-domestic pollutants to the City' sanitary sewer system that may impact the POTW. The City has not been delegated the authority to implement the Pretreatment program for IUs on the Fort Harrison military base; this includes the authority for right of entry, inspections/samplings, determining the impacts of the process wastewater from IUs to the POTW, developing control mechanisms or strategies, and enforcing permit/ordinance conditions to protect the POTW.</p>	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.8(f)(1)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Develop an IGA with Fort Harrison that delegates authority to implement the Pretreatment program for facilities located on the military base, including the VA hospital.</p>

## Section 5.0 – Local Limits

4. The City of Helena provided a technical memorandum to EPA on June 28, 2013 that stated that its local limits need to be updated. The City proposed a deadline of January 1, 2017 to develop and implement local limits because it is in the process of evaluating and implementing water and wastewater treatment process modifications which will reduce copper, zinc, total nitrogen, and total phosphorus.

The City provided the EPA with a January 28, 2016 letter updating its progress on local limits development. The City submitted the 1<sup>st</sup> draft local limits to the EPA on April 21, 2016 and EPA provided comments and feedback to ensure the local limits are approvable. The City of Helena resubmitted its 2<sup>nd</sup> draft local limits on November 21, 2016 in response to the EPA's comments.

The November 21, 2016 local limits submittal included correspondence that included the City's response to the EPA's comments (Part I) and the current steps taken by the City to implement local limits (Part II). The City calculated a zero discharge Maximum Allowable Industrial Loading (MAIL) for copper which would result in an economic disadvantage for the service area. The City requested in Part II of the correspondence to gather additional data to supplement the uncontrollable sector (domestic and commercial) dataset and to perform system-wide copper reduction to minimize the copper loading to the POTW. The City also committed to updating the municipal ordinance and submit with the final draft of the local limits to a modified deadline of April 21, 2017.

The EPA had not received the final draft of the City's local limits as of the audit date, even though the City committed to meeting the April 21, 2017 modified deadline. Nor has the EPA received any communication from the City regarding the progress/status of the local limits and ordinance. The requirement to provide a technical evaluation was included in the NPDES permit issued on October 1, 2012. The EPA has worked with the City since 2012 and the City's failure to meet the latest extended

### **Pretreatment Requirements**

40 CFR Part 122.44(j)(2)(ii)

40 CFR Part 403.5(c)(1)

### **Corrective Action Item**

Complete the development of the local limits, as discussed in Part II of the November 21, 2016 local limits correspondence and submit the final draft local limits to the EPA for evaluation and approval.

<p>deadline of April 1, 2017 is a failure to implement the program and meet the Pretreatment Requirement in 40 CFR Part 403.5(c)(1).</p>	
<p><i>Section 7.0 – Industrial User Inventory and Characterization</i></p>	
<p>5. The City’s procedure is adequate to meet the intent of 40 CFR 403.8(f)(2)(i-ii) to identify and classify IUs in the service area. The procedure does not address the notification of Industrial Users of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act.</p>	<p><b><u>Pretreatment Requirements</u></b> 40 CFR 403.8(f)(2)(iii)</p> <p><b><u>Corrective Action Item</u></b> Update the industrial waste survey procedure to include the notification the Industrial Users of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act. This notification should be contained in a follow up letter to the IUs that are significant or those facilities that are subject to control mechanisms such as BMPs instituted in a sector control program.</p>
<p>6. The City has developed an IU inventory of its service area that needs to be updated and maintained. The IU inventory is a listing of IUs in the service area that is generated in the JobCal program that does not appear to be current. The listing provides the facility name, address, and a broad characterization of the IUs. Although the industrial waste survey procedure is adequate, based on a review of available IU survey and inspection records, it is apparent that the City has not invested resources in using the methods discussed in the procedure.</p>	<p><b><u>Pretreatment Requirements</u></b> 40 CFR Part 403.8(f)(2)(i-iii) 40 CFR 403.12(i)(1)</p> <p><b><u>Corrective Action Item</u></b> Update and maintain the IU inventory based on available tools to the City such as the industrial waste survey, drive by inspections, facility inspections, etc. as identified in the City’s SOP for the industrial user inventory.  Update and maintain the IU inventory to include any potential non-domestic sources in the Aspen Meadows service area.</p>
<p>7. The Dental Amalgam Rule, found in 40 CFR Part 441 was promulgated as a final rule with new source dental facilities required to be in compliance with the Pretreatment Standards as of July 14, 2017 and existing source dental facilities required to be in compliance as of June 14, 2020. Compliance with the rule equals installation of an ISO1143 amalgam separator or equivalent device and compliance with the following two best management practices:</p> <p>a. Prohibition on the use of oxidizing or</p>	<p><b><u>Pretreatment Requirements</u></b> 40 CFR Part 403.8(f)(2)(i-iii) 40 CFR Part 441</p> <p><b><u>Corrective Action Item</u></b> Develop a complete inventory of the dental offices in the service area to determine new and existing dental facilities subject to the Dental Amalgam Rule promulgated by the</p>

<p>chlorine-containing line cleaners, and</p> <p>b. Ensuring all amalgam process wastewater including chair-side traps, screens, vacuum pump filters, dental tools, cuspidors or collection devices are treated through the amalgam separator.</p> <p>In addition, the new and existing dental facilities are required in 40 CFR Part 441.50 of the Final Dental Amalgam Rule to provide a report that characterizes the dental facility and certifies compliance with the requirements of the Rule. The new source dental facilities are required to be in compliance upon discharge and submit the one-time compliance report within 90 days of startup.</p>	<p>EPA on June 14, 2017. The City of Helena should evaluate providing outreach and education regarding compliance with the Dental Amalgam Rule to the dental facilities in its service area.</p>																					
<p>Section 8.0 – Control Mechanism (Permit) Evaluation and Permit Specific Issues</p>																						
<p>8. The City developed a permit template that adequately implements the permit conditions found in §6-4-14(D)(1-14) of the municipal ordinance with the exception of language in the permit template allowing administrative extensions. The authority to provide administrative extensions in permit have not been incorporated into the City’s municipal ordinance.</p>	<p><b><u>Pretreatment Requirements</u></b></p> <p>Municipal Ordinance, §6-4-14(D)(1-14)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Incorporate the authority to administratively extend permits or remove this language from the permit template.</p>																					
<p>9. The City issued the DIP permit on October 1, 2016 with the following daily and monthly limits for Arsenic, Chromium III, Chrome VI, and the daily permit limits for Mercury, Molybdenum and Selenium that do not have a defensible basis or justification. These permit limits are not incorporated in the City’s local limits resolution nor are these categorical Metal Finishing Categorical Standards.</p> <table><tr><th>Pollutant</th><th>Daily Maximum (mg/L)</th><th>Monthly Average (mg/L)</th></tr><tr><td>Arsenic</td><td>0.01</td><td>0.006</td></tr><tr><td>Chromium III</td><td>2.36</td><td>1.46</td></tr><tr><td>Chromium VI</td><td>0.41</td><td>0.25</td></tr><tr><td>Mercury</td><td>0.25</td><td></td></tr><tr><td>Molybdenum</td><td>1.28</td><td></td></tr><tr><td>Selenium</td><td>0.95</td><td></td></tr></table>	Pollutant	Daily Maximum (mg/L)	Monthly Average (mg/L)	Arsenic	0.01	0.006	Chromium III	2.36	1.46	Chromium VI	0.41	0.25	Mercury	0.25		Molybdenum	1.28		Selenium	0.95		<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.8(f)(1)(B)(3)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Ensure the DIP permit limits are enforceable and is required to modify the permit to incorporate enforceable limits for Arsenic, Chromium III, Chromium VI, Mercury, Molybdenum, and Selenium.</p>
Pollutant	Daily Maximum (mg/L)	Monthly Average (mg/L)																				
Arsenic	0.01	0.006																				
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<p>10. The Decorative Industrial Plating permit, issued by the City of Helena on October 1, 2016 did not include a Total Toxic Organics daily maximum permit limit of 2.13 mg/L, as required by the Metal Finishing Categorical Pretreatment Standards.</p>	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.8(f)(1)(B)(3) 40 CFR Part 433.17(a)</p> <p><b><u>Corrective Action Item</u></b></p> <p>The City of Helena is required to modify the DIP permit to include the TTO daily maximum limit.</p>
<p>11. The Decorative Industrial Plating permit, issued by the City of Helena on October 1, 2016 did not include monitoring for Total Toxic Organics.</p>	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.8(f)(1)(B)(3) 40 CFR Part 433.17(a) 40 CFR 433.12 (a) and (b).</p> <p><b><u>Corrective Action Item</u></b></p> <p>Modify the Decorative Industrial Plating permit to incorporate monitoring requirements for TTO or alternatively, solvent management plan and certification requirements found in 40 CFR 433.12 (a) and (b).</p>
<p>12. The Decorative Industrial Plating permit allows for grab sampling for compliance purposes. The grab sample at the facility does not appear to be representative of the 8-hour discharge from the facility. The permit rationale does not provide adequate justification regarding representative sampling techniques.</p>	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.8(f)(1)(B)(4)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Re-evaluate the sampling frequencies and types based on the discharge from DIP during a production day and modify the permit, if necessary.</p>
<p>13. The City of Helena is not performing independent pH samples at Decorative Industrial Plating, as required in the permit. The Pretreatment records only include pH monitoring performed by the facility.</p>	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.8(f)(2)(v)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Perform independent sampling for all pollutants of concern in the DIP permit.</p>
<p>14. Montana Rail Link is gathering non-reportable data from the final batch tank and submitting to the City for permission to discharge. The facility is not following up with sampling during discharge at the monitoring point. The data gathered from the final batch tank is not an actual discharge to the City's sanitary sewer system and is not enforceable.</p>	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.12(g)(3)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Ensure that Montana Rail Link is performing compliance sampling during an actual</p>

	discharge to the City's sanitary sewer system.
15. During a review of the permit records for Montana Rail Link, it was discovered that six monthly compliance reports for 2016-2017 were not date stamped. The EPA was unable to determine if the reports were received within the deadline due date.	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.12(g)(3)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Date stamp all received compliance reports to document they were submitted by the permit's deadline.</p>
16. The Montana Rail Link's self-monitoring report for the month of June 2016 was due on July 28, 2016, according to the permit. The compliance report was stamped received on August 9, 2016. There was not an enforcement response for this permit violation in the Pretreatment records.	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.12(g)(3)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Provide an enforcement response to Montana Rail Link for the late reporting of the June 2016 monthly compliance report.</p>
<i>Section 9.0 – Significant Industrial User Inspections</i>	
17. The SIU inspection reports are not based on current data gathered at the facility. For example, the inspection reports do not contain an evaluation of the facility's potential for slug discharge control or contain information regarding the facility's discharge practices to ensure the compliance sampling outlined in the permit is based on representative sampling. Based on the EPA's review of past year's records, the inspection reports are copied and pasted from the previous year dating back at least three years.	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.8(f)(1)(v)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Ensure the facility inspection reports are developed using specific and current information regarding the facility's processes and waste treatment methods.</p>
18. Decorative Industrial Plating discharges from the electrolytic cleaner an average of 8 hours per day. The City of Helena samples the facility using a grab sampling technique that is not representative of the production day.	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.12(g)(3)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Evaluate the sampling protocol at Decorative Industrial Plating to ensure the samples are representative of an actual production day. It is recommended the sampling events be conducted while the production lines are in operation, not during lapses in production.</p>
19. The City has not evaluated Decorative Industrial Plating to determine if it discharges total toxic organics in quantities that may impact the TTO daily maximum limit found in 433.17. The facility has an	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 433.17</p> <p><b><u>Corrective Action Item</u></b></p>



organized binder with the SDS sheets of its chemicals used in process.	Evaluate the chemicals to determine if the facility uses total toxic organics found in 40 CFR 433 and address the management of these chemicals through permit limits or through a toxic organic management plan.
<i>Section 10.0 – Control Authority Compliance Monitoring</i>	
20. The City of Helena developed sampling protocols for the SIUs in its service area. The sampling protocols for DIP and MRL provide descriptions regarding the sampling location, pollutants of concern, and sampling methods. However, the sampling protocols do not appear to require representative sampling at the SIUs. The City also needs to update the sampling protocols to include QA/QC to ensure adequate and defensible data, this includes use of field blanks, submitting blind standards, and duplicates to ensure the sampling techniques are consistent and to provide a confirmation of the laboratory analytical methods. In addition, QA/QC includes maintenance, cleaning and calibration of the sampling/monitoring equipment and associated equipment blanks.	<p><b><u>Pretreatment Requirements</u></b></p> <p>40 CFR Part 403.8(f)(2)(v)</p> <p>40 CFR Part 403.8(f)(2)</p> <p><b><u>Corrective Action Item</u></b></p> <p>Develop sampling procedures that provides documentation regarding representative sampling based on appropriate sampling procedures and techniques. The sampling plan needs to include adequate QA/QC procedures during sampling events to ensure the analytical data is valid and legally defensible.</p>

In addition to the corrective actions in the Pretreatment Audit Summary Table, additional recommended actions are identified within the audit report. Within **thirty (30) days of receipt** of this report; (1) provide the EPA and the Montana Department of Environmental Quality (MTDEQ) with a summary of corrective actions taken or dates that the corrective actions will be taken to address each of the findings identified in the report or submit any information that may change the findings, and, (2) provide a reporting schedule of status reports that summarize the progress of the Table 1 corrective actions to the EPA; these reports should be based on 6-month intervals.

Please cc: the following on all correspondence to my office.

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### Acronyms Used in this Report:

BMP	Best Management Practice(s)
BOD	Biochemical Oxygen Demand
CIU	Categorical Industrial User
EPA	U.S. Environmental Protection Agency, Region 8
ERP	Enforcement Response Plan
IGA	Intergovernmental Agreement
IU	Industrial User
IWS	Industrial Waste Survey
MAHL	Maximum Allowable Headworks Loading
MAIL	Maximum Allowable Industrial Loading
MTDEQ	Montana Department of Environmental Quality
POTW	Publicly Owned Treatment Works
SIU	Significant Industrial User
SNC	Significant Non-Compliance
TOMP	Toxic Organic Management Plan
TSS	Total Suspended Solids

## 1.0 Introduction

The Environmental Protection Agency (EPA) conducted an audit of the Pretreatment program administered by the City of Helena, MT (City) from September 11, 2017 through September 13, 2017. The exit interview was held on September 13, 2017 in which the EPA presented the preliminary findings and conclusions from the audit

Participants in the audit included:

### City of Helena, MT

Mark Fitzwater	Industrial Pretreatment Coordinator/Wastewater Superintendent
Lynora Rogstad	Administrative Assistant
Matt Culpo	Stormwater Engineer
Jeff Brown	WW Operator
Fred Isby	WW Operator
Randall Camp	Public Works Director (closing conference)

### EPA:

Al Garcia	Region 8 Pretreatment Coordinator
Paul Garrison	Region 8 NPDES Unit-Environmental Engineer

The primary purpose of the EPA audit is to evaluate the Pretreatment program administered and implemented by the City. In addition, the audit served as a forum for the EPA and the City to discuss issues related to the implementation of the Pretreatment program and for the EPA to provide outreach and training to the City.

The EPA Pretreatment audit consisted of evaluation of the following:

- The City's legal authority codified in its Municipal Ordinance (Title 6 – Public Utilities, Chapters 4 – Industrial Wastewater Regulations)
- Development and implementation of the City's local limits,
- The City's resources to implement the Pretreatment program in its service area,
- Implementation policies and templates developed by the City,
- Review and evaluation of the Pretreatment programmatic activities and records maintained for the permitted Significant Industrial Users (SIU),
- Site inspection of the selected SIUs in the service area,
- Discussion of the Pretreatment regulations and implementation.

The following sections of the report highlight the major findings and corrective actions or recommended actions of the audit. The action items to correct program deficiencies and meet regulatory requirements are identified in the Pretreatment Audit Summary Table, beginning on page 2 of this report. Specific actions to clarify and strengthen program implementation are provided as recommendations within the body of the audit report.

## 2.0 Publicly Owned Treatment Works (POTW) Information

The City owns and operates a Publicly Owned Treatment Works (POTW) located at 2108 Custer Avenue East, Helena, MT 59602. The POTW serves the legal boundary of the City, as well as the Aspen Meadows Sanitation District and the Veterans Administration Hospital-Fort Harrison Military Complex. The City's service area is shown in Figure 1.

A site visit of the POTW was performed during the audit to develop an overview of the POTW's processes and operations. The POTW site visit was conducted by Mr. Mark Fitzwater. An aerial view of the City's POTW, generated by Google Earth is shown in Figure 2.

The POTW services approximately 30,000 residents within its service area and has seven lift stations in the collection system. The Washington, Custer and Home Depot trunk lines collect the majority of wastewater in the service area. The Home Depot trunk line combines with the Custer trunk line and the wastewater is transported to the headworks of the POTW through these two collection lines. The trucked and hauled waste receiving station also discharges to the headworks. The headworks consists of a ¼-inch bar step screen to remove the solids and organic material. An automatic rake continually removes the accumulated solids on the screen into a roll off container. The effluent enters the aerated, rectangular grit chamber that has air pumps to remove grit. The solids and grit from the headworks is transported to the County landfill about 1/week.

The effluent from the headworks is split to the two primary clarifiers, currently only one is in operation. The non-operational primary clarifier acts as a stormwater retention basin. The scum from the primary clarifier is pumped to the digesters. The effluent is lifted to a splitter box to enter one of the three bioreactors. The bioreactors create an anoxic zone for nitrification, aerobic zone for denitrification to provide ammonia removal. The retention time in the bioreactors is about 1 day.

The effluent from the bioreactors are distributed to the three secondary clarifiers. The POTW returns 50% of the sludge as activated sludge to the bioreactors and wastes the remaining 50% to the digesters. The secondary clarifier effluent enters the UV disinfection channels for disinfection, is flow monitored through a cipoletti wier to the outfall and discharged to Prickly Pear Creek (Figure 3). The creek flows about 7 miles to Lake Helena.

### *Solids —*

There are four digesters at the POTW, two are heated and the solids retention time in these primary digesters is 45 days. The other two digesters act as storage tanks with floating covers and have a combined capacity of 500,000 gallons. The POTW transports about 50,000 gallons of liquid biosolids per day to a farm where it is spray applied onto the land.

### 2.1 NPDES Permit

The Montana Department of Environmental Quality (MTDEQ) issued the current NPDES permit #MT-0022641 on August 22, 2012 with an effective date of October 1, 2012 and an expiration date of September 30, 2017. The permit contains provisions for an EPA-

approved Pretreatment program in Part I.E.

According to information gathered during the audit, the City issues two permits to SIUs in the service area, include one permit subject to the Metal Finishing Categorical Pretreatment Standards. In its 2016 Annual Pretreatment Report to EPA, the City reported a hydraulic design capacity of 5.4 MGD with an actual flow of 3.08 MGD. The total SIU flow was reported to be 0.00 MGD with an industrial contribution of 0.00%.







**Figure 2- City of Helena POTW, Google Earth View**



**Figure 3 – Outfall 001 to Prickly Pear Creek**

### **3.0 Resources**

#### *3.1 Resources Regulatory Background*

The General Pretreatment Regulations found in *40 CFR 403.8(f)(1-6)* include POTW Pretreatment requirements and procedures to implement an approved Pretreatment program. These requirements and procedures include the legal authority and the implementation procedures of the Pretreatment program (permitting, inspections, sampling, industrial waste survey, receipt of IU reporting and notification, record-keeping, slug discharge control, data evaluation and enforcement for non-compliance). In addition, the General Pretreatment Regulations found in *40 CFR 403.8(f)(3)* state that the POTW shall have sufficient resources and qualified personnel to carry out the authorities and implementation procedures of the Pretreatment program.

A strong Pretreatment program requires adequate and qualified staffing to implement the Pretreatment program in its service area. The resources required for each implementation activity depends largely on the size of the service area, number of industrial users/significant industrial users/sector control programs, and Pretreatment program policies. A strong and successful program also requires a consistent funding mechanism to ensure the program is adequately funded and equipped to fully implement the program.

#### *3.2 Evaluation of the City's Resources and Funding*

According to information submitted in the 2016 Annual Pretreatment Report to the EPA, the City reported a total of 1.0 FTE committed to the Pretreatment program. Based upon information gathered during the audit, the FTEs consist of the following personnel performing Pretreatment duties:

- 0.3 FTE – Pretreatment Coordinator,
- 0.1 FTE – Administrative Assistant,
- 0.6 FTE – Wastewater Operators

The Pretreatment Coordinator position is responsible for the oversight of the programmatic activities of the City's Pretreatment program. The Pretreatment Coordinator implements the permitting, compliance evaluation, and enforcement activities of the program and supervises the wastewater operators as they perform the field activities of the program such as grease interceptor inspections, IU inspections, and sampling of the SIUs. The Administrative Assistant is tasked with office support.

The Pretreatment Coordinator is also the Wastewater Treatment Plant Superintendent and is primarily responsible for the administration of the wastewater plant. The Pretreatment Coordinator in his role as the Wastewater Treatment Plant Superintendent directly reports to the Public Works Director who directly reports to the City Manager. The authorized signatory of the discharge monitoring reports for the NPDES permit is Mark Fitzwater, Pretreatment Coordinator and Wastewater Superintendent.

The City reported a Pretreatment budget of \$124,859 in its 2016 Annual Pretreatment Report to EPA and stated that this was higher than normal because of local limits analytical

costs. During the audit, the City stated a budget of approximately \$50,000 with operating costs of \$19,580. The budget is created as a separate line item dedicated to the Pretreatment program from the Wastewater Enterprise fund. The City has three automatic samplers and field equipment such as a pH and chlorine meters, personal protective equipment to perform the programmatic sampling and inspection activities of the Pretreatment program. The City does not have a dedicated vehicle for the Pretreatment program but has access to the vehicles assigned to the wastewater treatment plant.

The Pretreatment Regulations at 40 CR 403.8(f)(3) state that the POTW shall have “sufficient resources and qualified personnel to carry out the authorities and procedures” of the Pretreatment program. Based on an EPA’s evaluation, it appears that the City has adequate resources, including staffing and finances to implement the Pretreatment program. However, based on review of the Pretreatment records, the current Pretreatment Coordinator is not implementing the Pretreatment program adequately or devoting the 0.3 FTE as reported in the annual Pretreatment Report. The Pretreatment Coordinator does not meet the “qualified personnel” criteria in 40 CFR 403.8(f)(3) and based on conversations during the audit, is not interested in implementing the programmatic activities of the Pretreatment program. This lack of commitment to the City’s Pretreatment program is reflected in the quality of the Pretreatment records, as identified in Section 8.0 of this report and in the sampling and inspection field activities. The POTW staff devoted to the field programmatic activities of the Pretreatment program (sampling and inspections) are not producing reports and data expected of qualified Pretreatment personnel. It does not appear that the staff are properly trained to conduct effective facility inspections or representative and defensible control authority monitoring.

The City is required to ensure qualified personnel carry out the authority and procedures of the Pretreatment program. The City must provide the EPA with a staffing plan that includes an evaluation of the Pretreatment program’s ability to implement all required programmatic activities. The City’s poor resource management and lack of commitment to the Pretreatment program was previously identified by the EPA in a Pretreatment audit conducted in July 14-16, 2009. A corrective action item was included in the 2009 audit report with a follow up requirement to evaluate staffing levels, resource allocation to the Pretreatment program, budget levels and general organization of the Pretreatment program. This is an issue that has not been corrected by the City. The budget, FTE, and organization/commitment to the Pretreatment program have not changed since the 2009 audit and this is reflected in the failure to implement the Pretreatment program, as documented in this audit report.

There is a variety of Pretreatment training available, such as the annual EPA Region 8 Pretreatment Workshop. The Region 8 Pretreatment workshop provides training sessions directly related to Pretreatment implementation, updates to upcoming regulations and policies, and networking opportunities. The Region 8 Pretreatment workshop is the most comprehensive and convenient workshop within the western United States and ensures Pretreatment programs are directly trained in Pretreatment regulations/implementation activities and are educated about current and upcoming regulations and policies.

The EPA recommends local programs participate in Pretreatment training and utilize peer

perspectives to help identify programmatic areas of improvement and determine efficient methods to find solutions. This helps in building and maintaining a strong and effective local Pretreatment program. The EPA provides “Pretreatment 101” webinar training at regular intervals. The Pretreatment 101 series is designed to provide consistent national training to local and state Pretreatment programs. The webinar series is located at <https://www.epa.gov/npdes/national-pretreatment-program-events-training-and-publications#training>. Archived presentations may be downloaded and a schedule of future training opportunities is located at the website.

In addition, the EPA recommends the utilization of the Yahoo Pretreatment Coordinators group that is found at the following website:

[https://groups.yahoo.com/neo/groups/Pretreatment\\_Coordinators/info](https://groups.yahoo.com/neo/groups/Pretreatment_Coordinators/info) .

#### Corrective Action Items:

1. The City of Helena is required to qualified personnel carry out the authority and procedures of the Pretreatment program. The City must provide the EPA with a staffing plan that includes an evaluation of its commitment to the Pretreatment program and ensure it adequately implements all programmatic activities.

## **4.0 Municipal Ordinance and Intergovernmental Agreements**

### *4.1 Legal Authority Background*

40 CFR Part 403.8(f)(1) of the General Pretreatment Regulations states that “The POTW shall operate pursuant to legal authority enforceable in Federal, State or local courts, which authorizes or enables the POTW to apply and to enforce the requirements of sections 307 (b) and (c), and 402(b)(8) of the Act and any regulations implementing those sections. Such authority may be contained in a statute, ordinance, or series of contracts or joint powers agreements which the POTW is authorized to enact, enter into or implement, and which are authorized by State law.

At a minimum, this legal authority shall enable the POTW to:

- i.* Deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants, to the POTW by Industrial Users where such contributions do not meet applicable Pretreatment Standards and Requirements or where such contributions would cause the POTW to violate its NPDES permit;
- ii.* Require compliance with applicable Pretreatment Standards and Requirements by Industrial Users;
- iii.* Control through Permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under §403.3(v), this control shall be achieved through individual permits or equivalent individual control mechanisms issued to each such User...

- iv. Require (A) the development of a compliance schedule by each Industrial User for the installation of technology required to meet applicable Pretreatment Standards and Requirements and (B) the submission of all notices and self-monitoring reports from Industrial Users as are necessary to assess and assure compliance by Industrial Users with Pretreatment Standards and Requirements, including but not limited to the reports required in §403.12.
- v. Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users. Representatives of the POTW shall be authorized to enter any premises of any Industrial User in which a Discharge source or treatment system is located or in which records are required to be kept under §403.12(o) to assure compliance with Pretreatment Standards. Such authority shall be at least as extensive as the authority provided under section 308 of the Act;
- vi. (A) Obtain remedies for noncompliance by any Industrial User with any Pretreatment Standard and Requirement. All POTW's shall be able to seek injunctive relief for noncompliance by Industrial Users with Pretreatment Standards and Requirements. All POTWs shall also have authority to seek or assess civil or criminal penalties in at least the amount of \$1,000 a day for each violation by Industrial Users of Pretreatment Standards and Requirements.  
  
(B) Pretreatment requirements which will be enforced through the remedies set forth in paragraph (f)(1)(vi)(A) of this section, will include but not be limited to, the duty to allow or carry out inspections, entry, or monitoring activities; any rules, regulations, or orders issued by the POTW; any requirements set forth in control mechanisms issued by the POTW; or any reporting requirements imposed by the POTW or these regulations in this part. The POTW shall have authority and procedures (after informal notice to the discharger) immediately and effectively to halt or prevent any discharge of pollutants to the POTW which reasonably appears to present an imminent endangerment to the health or welfare of persons. The POTW shall also have authority and procedures (which shall include notice to the affected industrial users and an opportunity to respond) to halt or prevent any discharge to the POTW which presents or may present an endangerment to the environment or which threatens to interfere with the operation of the POTW. The Approval Authority shall have authority to seek judicial relief and may also use administrative penalty authority when the POTW has sought a monetary penalty which the Approval Authority believes to be insufficient.
- vii. Comply with the confidentiality requirements set forth in §403.14.”

The provisions in 40 CFR Part 403.8(f)(1)(i-vii) do not provide local Pretreatment programs with the legal authority but they do establish the minimum requirements for the local municipality to implement the Pretreatment program. A POTW's legal authority derives from state law. Therefore, state law must confer the minimum legal authority required by the General Pretreatment Regulations on a POTW.

To apply the regulatory authority provided by state law, it is necessary for the POTW to establish local regulations to legally implement and enforce pretreatment requirements. A

POTW's legal authority is typically established in a sewer use ordinance which is usually part of the municipality's code or in the case of a sanitation district, its Rules and Regulations. The EPA's 2007 *Model Pretreatment Ordinance* provides a template for POTWs that are required to develop pretreatment programs and can be found at the following weblink:

[https://www3.epa.gov/npdes/pubs/pretreatment\\_model\\_suo.pdf](https://www3.epa.gov/npdes/pubs/pretreatment_model_suo.pdf).

#### 4.2 *City of Helena Municipal Ordinance*

The EPA approved the City's original program submittal on December 6, 1986. The municipal ordinance was updated in the 1990's to address the Domestic Exclusion Sewage Regulations and in 2002 to update the local limits. The municipal ordinance was updated in 2010 to address the Pretreatment Streamlining Rule promulgated by the EPA in 2005. The municipal ordinance was approved by the City Council, with public participation and in addition, was public noticed and approved by the EPA on May 23, 2010. The current ordinance established in Title 6 – Public Utilities, Chapter 4 – Industrial Wastewater Regulations and Resolution 11726 adopted on January 28, 2002 to incorporate the City's local limits, provide the City a good legal framework to implement the Pretreatment programmatic activities for every IU in the service area.

The City provided the municipal ordinance to the EPA for review, prior to the audit. Based on an evaluation of the municipal ordinance, the City is required to update the current municipal ordinance during the next revision to effectively implement the Pretreatment program:

- Significant Industrial User (SIU) definition found in §6-4-4 – The EPA recommends the City replace “any wastewater user” in the SIU definition with “any industrial user”. Wastewater User is not defined in the Pretreatment Ordinance.
- Best Management Practices (BMP) are not currently established in §6-4-7(B) of the municipal ordinance as local limits or Pretreatment Standards. The City needs to add this language to ensure the BMPs are enforceable.
- Toxic vapors, fumes specific prohibition found in §6-4-5(C)11 of the municipal ordinance is not equivalent with the Federal Regulations. The specific prohibition for toxic vapors or fumes found in the Pretreatment Regulations, 40 CFR 403.5(b)(7) state the following: “Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems.”
- Enforcement authority to immediately halt actual/threatened discharge provisions, as required in 40 CFR Part 403.8(f)(1)(vi)(B) of the Pretreatment Regulations.



### 4.3 Inter-Jurisdictional or Governmental Agreements (IGA)

#### 4.3.1 IGA Regulatory Background

A POTW's authority to implement and enforce its approved Pretreatment program is directly related to its regulatory jurisdiction. Local entities with connectors or outside jurisdictions that contribute wastewater must establish legally binding procedures to ensure that all IUs in these outside contributing jurisdictions are subject to enforceable Pretreatment standards and requirements, as required in §403.8(f)(1).

40 CFR Part 403.8(f)(1)(i) states that the "The POTW shall operate pursuant to legal authority enforceable in Federal, State or local courts, which authorizes or enables the POTW to apply and to enforce the requirements of sections 307 (b) and (c), and 402(b)(8) of the Act and any regulations implementing those sections. *"Such authority may be contained in a statute, ordinance, or series of contracts or joint powers agreements which the POTW is authorized to enact, enter into or implement, and which are authorized by State law."* [Emphasis added]

The local entity that implements the Pretreatment program must either obtain this authority for itself through an intergovernmental agreement (IGA) or ensure that the outside contributing jurisdiction has both the authority and the obligation to implement and enforce the Pretreatment Standards and Requirements against every IU that discharges to the POTW.

#### 4.3.2 Evaluation of the City's IGAs with Outside Contributing Jurisdictions

The Ordinance is in effect for the service area of the City of Helena. The City has two outside contributing jurisdictions, Aspen Meadows Water and Sewer District located between Helena and East Helena and Fort Harrison, located three miles west of Helena. The Aspen Meadows Water and Sewer district consists solely of residential/domestic sources, according to the City. Fort Harrison is a military installation and contains training facilities for the Montana National Guard and Army Reserve, Veteran's Administration Hospital, and other associated military facilities.

The City does not have an IGA with the Aspen Meadows Water and Sewer District or Fort Harrison. The EPA recommends the City evaluate developing an IGA with the Aspen Meadows Water and Sewer District, however, this is not required unless this District has IUs that contribute non-domestic pollutants to the POTW.

The VA hospital, located on the Fort Harrison military base, generates non-domestic pollutants to the City's sanitary sewer system that may impact the POTW. The City has not been delegated the authority to implement the Pretreatment program for IUs on the Fort Harrison military base; this includes the authority for right of entry, inspections/samplings, determining the impacts of the process wastewater from IUs to the POTW, developing control mechanisms or strategies, and enforcing permit/ordinance conditions to protect the POTW. The City is required to develop an IGA with Fort Harrison that delegates authority to implement the Pretreatment program for facilities generating non domestic wastewater located on the military base, including the VA hospital.



### Corrective Action Items:

1. The City of Helena needs to update the current municipal ordinance during the next revision to establish authority to implement the Pretreatment program:
  - a. Significant Industrial User (SIU) definition found in §6-4-4 – The EPA recommends the City replace “any wastewater user” in the SIU definition with “any industrial user”. Wastewater User is not defined in the Pretreatment Ordinance.
  - b. Best Management Practices (BMP) are not currently established in §6-4-7(B) of the municipal ordinance as local limits or Pretreatment Standards. The City needs to add this language to ensure the BMPs are enforceable.
  - c. Toxic vapors, fumes specific prohibition found in §6-4-5(C)11 of the municipal ordinance is not equivalent with the Federal Regulations. The specific prohibition for toxic vapors or fumes found in the Pretreatment Regulations, 40 CFR 403.5(b)(7) state the following: “Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems.”
  - d. Enforcement authority to immediately halt actual/threatened discharge provisions, as required in 40 CFR Part 403.8(f)(1)(vi)(B) of the Pretreatment Regulations.
2. The City of Helena is required to develop an IGA with Fort Harrison that delegates authority to implement the Pretreatment program for facilities located on the military base, including the VA hospital.

## **5.0 Local Limits**

### *5.1 Local Limits Regulatory Background*

Local limits are required because they are protective of the POTW, the collection system, and the POTW’s site-specific standards. These site-specific standards may be NPDES permit effluent limits, biosolids limits, worker health and safety standards or other local standards. The technically-based local limits are required to be based upon a recent and adequate data set and maximum loading of pollutants that can be accepted by the POTW. The maximum loading of pollutants or the Maximum Allowable Headworks Loadings (MAHL) should be based on criteria established by the POTW’s NPDES permit, water quality standards, biosolids regulations and permit limits, worker health and safety, human health criteria, and other state standards or local concerns.

The local limits shall be based on the following:

- Sampling of the service area to develop an adequate data set,
  - data for local limits inputs (INF, EFF, Biosolids, Commercial, Residential, Industrial, Trucked/Hauled Waste)
- current POTW standards/criteria,
- POTW removal efficiency and pollutant partitioning,

- data evaluation,
- identification of pollutants of concern,
- calculations of loadings and determination of MAHL, and,
- development of local limits and allocation methods.

40 CFR 403.5(c)(1) of the General Pretreatment Regulations states that “Each POTW developing a POTW Pretreatment Program pursuant to §403.8 shall develop and enforce specific limits to implement the prohibitions listed in paragraphs (a)(1) and (b) of this section [*general and specific prohibitions*]. Each POTW with an approved pretreatment program shall continue to **develop these limits as necessary** and effectively enforce such limits.” [*Clarification and Emphasis added*] In addition, 40 CFR 122.44(j)(2)(ii) of the NPDES regulations require POTWs to provide a written technical evaluation of the need to revise local limits following permit issuance or reissuance.

The Annual Pretreatment Reports to the EPA Region 8 provides the POTW an opportunity to perform reviews for exceedances of the established MAHL for the pollutant of concern, on an annual basis. The POTW compares both the maximum and average influent data for the reporting year against the MAHL to determine if there were any exceedances. In addition, the POTW is required to report biosolids data to determine if there were any changes or concerns with the biosolids loadings. An exceedance of the established MAHL may be indicative of a change in the service area, POTW or non-domestic loadings and may indicate a need to recalculate the local limits. However, the annual review may not have addressed conditions that can change over time, such as operating conditions, environmental criteria/standards, data or assumptions and that may make local limits no longer appropriate, protective or legally-defensible.

The technical evaluation, required by 40 CFR 122.44(j)(2)(ii) of the NPDES regulations is a detailed re-evaluation of data, criteria, conditions, and assumptions on which local limits are based to determine whether any significant changes affecting the local limits have occurred. Chapter 7 of the Local Limits Development Guidance Manual, EPA-833-R-04-002A, July 2004 provides guidance on completing the technical evaluation of local limits.

A POTW should compare its current conditions and requirements with those that existed when the local limits were developed. The EPA recommends POTWs determine if recalculating existing local limits or developing MAHLs for new pollutants of concern are necessary in response to the following criteria:

1. Removal Efficiencies
  - a. Modification to the POTW or new POTW brought online,
  - b. Changes in POTW processes or operations that have affected the POTW removal efficiencies
2. Total POTW or IU loading
  - a. Significant changes to flow to the POTW,
  - b. Significant changes to loadings to the POTW due to new IUs, changes in loadings at existing IUs or significant growth in the service area,
  - c. Significant changes in loadings from SIUs in the service area,
3. Limiting Criteria

- a. New or revised NPDES permit limits,
- b. New or revised Biosolids standards,
- c. Changes in EPA or State Criteria (acute and chronic water quality standards for the receiving waters, reuse water quality criteria) at the time of local limit development to existing criteria
- 4. Sludge Characteristics or Method of Disposal
  - a. Changes in loadings to biosolids,
  - b. Changes in biosolids disposal methods
- 5. Background Concentrations of pollutants in Receiving Water

### 5.2 Local Limits Requirements Established in the City's NPDES Permits

The Montana Department of Environmental Quality (MTDEQ) issued the current NPDES permit # CO-0040053 on August 22, 2012 that was effective on October 1, 2012. The permit was scheduled to expire on September 31, 2017. The NPDES permit contains provisions for an EPA-approved Pretreatment program in Part 1.E.

### 5.3 The EPA Evaluation of City's Local Limits

Since the original EPA approval of the City's Pretreatment program in 1986, the City updated its technically-based local limits in 2002. The site-specific and technically-based local limits are found in Resolution 11726 and shown in Table 1.

**Table 1 – City of Helena Local Limits**

Pollutant	Symbol	Local Limits (mg/L)
Arsenic, Total	As	0.97
Cadmium, Total	Cd	0.6
Chromium III	Cr III	120.78
Chromium VI	Cr VI	5.44
Chromium, Total	Cr	NA
Copper, Total	Cu	18.56
Lead, Total	Pb	0.54
Mercury, Total	Hg	0.42
Molybdenum, Total	Mo	10.28
Nickel, Total	Ni	9.61
Selenium, Total	Se	2.44
Silver, Total	Ag	5.32
Zinc, Total	Zn	4.63

In addition to the established technically-based local limits, the City's municipal ordinance

prohibits dilution as a substitute for treatment in §6-4-8. The City has incorporated a numeric ordinance pH limit of “any wastewater having a pH less than 5.5 or greater than 10.5. The City needs to ensure this limit has a basis that is defensible, should this limit be challenged. The City should evaluate the underlying basis or justification for these pH limits of between 5.5 and 10.5, which is more stringent than the Federal pH specific prohibition of pH below 5.0. A basis for adoption of local limits for non-technically based limits such as these pH limits may be contained in EPA or other scientific reports, collection system observations, studies performed in other POTWs, etc.

#### *5.4 Technical Evaluation of the City's Local Limits*

The NPDES permit effective on October 1, 2012 required the City in Part 1.E.b to: “In accordance with EPA policy and with the requirements of 40 CFR sections 403.8(f)(4) and 403.5(c), the Permittee shall determine if technically based local limits are necessary to implement the general and specific prohibitions of 40 CFR sections 403.5(a) and (b). This evaluation should be conducted in accordance with the latest revision of the EPA Region VIII Strategy for Developing Technically Based Local Limits", and after review of EPA's "Local Limits Development Guidance" July 2004. Where the Permittee determines that revised or new local limits are necessary, the Permittee shall submit the proposed local limits to the Approval Authority in an approvable form in accordance with 40 CFR Section 403.18.”

The technical evaluation of the City's local limits was identified as a requirement in the Pretreatment Audit conducted by the EPA on July 14, 2009 through July 16, 2009. During the 2009 audit, the EPA identified that the City's local limits were developed in 2002 and needed to be updated to include current data from the service area, POTW, and SIUs as well as providing a technical calculation of the local limits based on current standards. At the time, the City's NPDES permit was administratively extended and the EPA provided this requirement to occur when the permit was reissued.

The City provided a technical memorandum to EPA on June 28, 2013 in response to the October 1, 2012 NPDES permit reissuance and the 2009 Pretreatment Audit requirement. The City's technical memorandum stated that its local limits need to be updated and proposed a delay in development and implementation because the City was in the process of evaluating and implementing water and POTW treatment process modifications which will reduce copper, zinc, total nitrogen, and total phosphorus. The City was concerned that the local limits calculations may not be based on accurate treatment removal efficiencies and result in overly stringent local limits for its SIUs. The City was also investigating the hardness values used in the 2012 NPDES permit because these values would directly impact the local limits calculations. The City proposed the following schedule for local limits development:

- October 1, 2013            City begins implementation of WWTP optimization
- April 1, 2014            WWTP initiate data collection
- September 28, 2013    Data collection for local limits development complete
- February 1, 2016        City submits draft local limits to EPA
- June 30, 2016            EPA and City agree on updated local limits

- July 15, 2016 City begins process to include local limits in ordinance
- December 1, 2016 Local Limits updated in ordinance
- January 1, 2017 SIU permits updated to include adopted local limits

The City provided the EPA with January 28, 2016 letter updating its progress on local limits development update. The City slightly delayed its submittal of local limits from February 1, 2016 to May 1, 2016 but still committed to meeting its proposed January 1, 2017 deadline. The EPA in a follow-up telephone conversation slightly modified the City's updated schedule to ensure the City was able to meet the January 1, 2017 deadline. The City submitted the 1<sup>st</sup> draft local limits to the EPA on April 21, 2016 and EPA provided comments to ensure the local limits are approvable. The City resubmitted its 2<sup>nd</sup> draft local limits on November 21, 2016 in response to the EPA's comments.

The November 21, 2016 local limits submittal included correspondence that contained the City's response to the EPA's comments (Part I) and the current steps taken by the City to implement local limits (Part II). The City calculated a zero discharge MAIL for copper which would result in an economic disadvantage for the service area. The City requested in Part II of the correspondence to gather additional data to supplement the uncontrollable sector (domestic and commercial) dataset and to perform the following system-wide copper reduction to minimize the copper loading to the POTW:

- Water system sampling,
- Watershed sampling,
- Water distribution system corrosion control, and
- POTW optimization and process modification.
- Note: The City committed to updating the municipal ordinance and submitting it with the final draft of the local limits on a modified deadline of April 21, 2017.

The EPA has not received the final draft of the City's local limits as of the audit date. The City committed to meeting the April 21, 2017 modified deadline. The EPA has not received any communication from the City regarding the progress/ status of the local limits and ordinance. The requirement to provide a technical evaluation was a requirement of the NPDES permit issued on October 1, 2012. The EPA has worked with the City on this issue since 2012. The City's failure to meet the latest extended deadline of April 1, 2017 is a failure to implement the program and meet the Pretreatment Requirement in 40 CFR Part 403.5(c)(1) that states: "Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits." The City is required to complete the development of the local limits, as discussed in Part II of the November 21, 2016 local limits correspondence and submit the final draft local limits to the EPA for evaluation and approval.

### 5.5 *Permit or Site-Specific Limits*

Local municipalities implementing the Pretreatment program should have the ability to establish site or permit-specific limits as deemed necessary to be protective of the POTW. This is a beneficial authority because situations or projects may occur in the service area

that the municipality may want to provide control to protect the POTW, however, the current limits in the ordinance may not address the pollutant of concern.

The EPA considers the development of any local limit, whether codified in the municipal ordinance or developed on a site-specific situation (i.e., permits-specific limit) to be a program modification (53 FR 40579, Final Rule, General Pretreatment Regulations for Existing and New Sources, October 17, 1988). Therefore, the development of any local limit is required to follow the approval and public notice provisions, both at the local level and by submitting to the EPA.

§403.5(c)(3) of the General Pretreatment Regulations state that “Specific effluent limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond.” The EPA recommends that POTWs conduct public participation in the local limits process (whether codified in the municipal ordinances or new limits developed in a permit) as openly as possible. This may involve notifying the SIU/IUs and other affected parties of the proposed limits or announcing a 30-day public comment period. This would allow the public sufficient time for the public to participate, which is a fundamental goal of the Clean Water Act in Section 101(e).

The City has not adopted the authority to establish site- or permit-specific limits in its municipal ordinance or in the local limits resolution. The EPA recommends the City evaluate incorporating this authority by adding the following suggested language:

“The City may establish more stringent pollutant limits, additional site-specific pollutant limits, best management practices, and/or additional pretreatment requirements when, in the judgment of the City, such limitations are necessary to implement the provisions of this code.”

#### Corrective Action Items

1. The City of Helena is required to complete the development of the local limits, as discussed in Part II of the November 21, 2016 local limits correspondence and submit the final draft local limits to the EPA for evaluation and approval.

## **6.0 Pretreatment Operating Procedures**

### *6.1 Regulatory Background*

40 CFR Part 403.8(f)(2) of the General Pretreatment Regulations states that “The POTW shall **develop and implement** procedures to ensure compliance with the requirements of a Pretreatment Program.” (**emphasis added**) The General Pretreatment Regulations identify these minimum procedures in §403.8(f)(2)(i-viii) to include the following **implementation** activities, summarized below:

- Identify and locate all possible IUs that might be subject to the Pretreatment program;
- Obtain information describing the character and volume of wastes discharged by IUs;
- Notify IUs of all applicable Pretreatment standards and other applicable State or

- Federal standards or requirements;
- Review self-monitoring reports and other notices submitted by IUs;
- Randomly sample and analyze effluents from SIUs;
- Evaluate whether each SIU needs a slug discharge control plan;
- Investigate instances of noncompliance with Pretreatment standards and requirements;
- Comply with public participation requirements.

The requirements listed in 403.8(f)(2) includes the **development** of written Standard Operating Procedures (SOPs) and templates. Adequate and updated SOPs provide the following benefits to a Pretreatment program:

- Develop the baseline knowledge of the Pretreatment Regulations and establish the framework for program implementation,
- Adequately implement the authorities established in the municipal ordinance and ensure consistency in program implementation,
- Retain institutional and historical knowledge developed within the POTW's program, and
- Provide a valuable training resource for new or inexperienced staff members.
- Ultimately, the benefits of valid SOPs to the Pretreatment program are reduced work effort, along with improved data comparability, credibility, and legal defensibility.

In addition, the development of written SOPs and templates allow the EPA to determine if the procedures adequately implement the legal authority developed in the municipal ordinance as required, in §403.8(f):

“A POTW Pretreatment program must be based on the following legal authority and include the following procedures. These authorities and procedures shall at all times be fully and effectively exercised and implemented.”

## 6.2 *Standard Operating Procedures (SOPs)*

The City has developed the following procedures and templates to address the implementation areas of the Pretreatment program:

- IU inventory and characterization
- Determination of significant industrial users and permitting
- Local Limits and SIU sampling
- Enforcement
- BMPs for Hauled waste and RV sites
- Emergency Actions for Harmful Pollutants in the Influent
- Special Discharge request form

The EPA evaluated the City's procedures and templates during the audit to ensure these met the requirements listed in 40 CFR 403.8(f)(2). As discussed in §6.1 of this audit report, developing SOPs are beneficial for the City's Pretreatment program but most importantly,

to ensure adequate implementation of the authorities established in the municipal ordinance and ensure consistency in program implementation. The EPA recommends the City continually evaluate the necessity to develop SOPs for other programmatic activities.

The EPA evaluated and provides detailed comments in later sections within this audit report for the following SOPs listed below. The EPA considers the following SOPs to be priority SOPs to ensure consistent implementation with required components of the Pretreatment program:

- Industrial User Inventory and Characterization Procedures (*discussed in Section 7.0*)
- Sampling Plan, site-specific sampling protocol, Quality Assurance and Quality Control (*discussed in Section 10.0*)
- Enforcement Response Plan and data compliance evaluation (*discussed in Section 11.0*)

### 6.3 Templates

Templates and checklists are also critical to a Pretreatment program to ensure consistent and appropriate implementation of the Pretreatment regulations. Based on information gathered during the audit, the City developed various IU waste survey and screening forms, permit application, and a permit template. Based on the EPA's evaluation of the City's templates and checklists, it appears these documents provide the City adequate tools to implement the Pretreatment program during the developing/maintaining the IU inventory and determining permit conditions during the issuance of permits.

### 6.4 Records and Data Management

#### 6.4.1 Regulatory Background

The recordkeeping requirements of the Pretreatment program are established in *40 CFR 403.12(o)(1-3)*:

“(1) Any Industrial User and POTW subject to the reporting requirements established in this section shall maintain records of all information resulting from any monitoring activities required by this section, including documentation associated with Best Management Practices. Such records shall include for all samples:

- (i) The date, exact place, method, and time of sampling and the names of the person or persons taking the samples;
- (ii) The dates analyses were performed;
- (iii) Who performed the analyses;
- (iv) The analytical techniques/methods use; and
- (v) The results of such analyses.

(2) Any Industrial User or POTW subject to the reporting requirements



established in this section (including documentation associated with Best Management Practices) shall be required to retain for a minimum of 3 years any records of monitoring activities and results (whether or not such monitoring activities are required by this section) and shall make such records available for inspection and copying by the Director and the Regional Administrator (and POTW in the case of an Industrial User). This period of retention shall be extended during the course of any unresolved litigation regarding the Industrial User or POTW or when requested by the Director or the Regional Administrator.

(3) Any POTW to which reports are submitted by an Industrial User pursuant to paragraphs (b), **[baseline monitoring report]** (d), **[90-day report]** (e), **[categorical industrial user monitoring report]** and (h) **[significant industrial user monitoring report]** of this section shall retain such reports for a minimum of 3 years and shall make such reports available for inspection and copying by the Director and the Regional Administrator. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Industrial User or the operation of the POTW Pretreatment Program or when requested by the Director or the Regional Administrator.” **[Emphasis added]**

#### 6.4.2 Recordkeeping and Data Management Procedures

The Pretreatment records are maintained by the Administrative Assistant and appear to be well organized and accessible. The permit files are organized by calendar year and appear to be complete, with the exception of the IU inventory. However, as identified and discussed in Sections 7.0-Industrial User Inventory, 8.0-Control Mechanism, and 9.0-Facility Inspection indicate that the City is not implementing the Pretreatment program to produce current records that meet the Pretreatment Standards and Requirements.

#### 6.5 Receipt of Discharge Monitoring Reports

The General Pretreatment regulations in 40 CFR Part 403.8(f)(2)(vii) require a POTW to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under §403.12 **[IU compliance reports]**, or indicated by analysis, inspection, and surveillance activities **[control authority monitoring]**” **[Emphasis added]**. This requires the POTW to ensure adequate receipt and tracking of self-monitoring reports and notifications; have procedures to evaluate the data and information contained within these reports and notices; and determine compliance with the Pretreatment standards (permit limits and conditions).

Based on information gathered during the audit, the City receives the SIU self-monitoring reports and is inconsistent with date stamping these reports to ensure they are received within the deadline, as documented in Section 8.0 of this audit report.

#### 6.6 Management of Confidential Records

The City has established the public availability of the Pretreatment records and the

provisions to establish confidential business information required in 40 CFR Part 403.14 of the General Pretreatment Regulations and incorporated by the City in §6-4-7(L) of the municipal ordinance.

“Any industrial user submitting information to the city pursuant to this chapter may claim it to be confidential if it demonstrates to the satisfaction of the department that release of such information would divulge information, processes, or methods of production entitled to protection as the user's trade secrets. A claim of confidentiality is governed by the following conditions:

The user must assert such claim at the time of submission by stamping the words "confidential business information" on each page containing such information. If no such claim is made at the time of submission, the city may make information available to the public without further notice.

The department may not publicly disclose approved confidential information, except as required by law. Confidential information may be used by the city, or any federal or state agency in judicial review or enforcement proceedings involving the user furnishing the information.”

According to information gathered during the audit, the City does not currently maintain confidential business information for a permitted facility.

#### Corrective Action Items:

1. None identified

## **7.0 Industrial User Inventory and Characterization**

### *7.1 Regulatory Background*

The General Pretreatment Regulations state in 403.8(f)(2)(i-iii) that a POTW shall develop and implement procedures to ensure compliance with requirements of a Pretreatment Program. These requirements can be summarized as follows:

- i. “Identify and locate all possible Industrial Users which might be subject to the POTW Pretreatment Program. Any compilation, index or inventory of Industrial Users made under this paragraph shall be made available to the Regional Administrator or Director upon request.” ***This requires a POTW to develop and maintain an inventory of IUs in the service area.***
- ii. “Identify the character and volume of pollutants contributed to the POTW by the Industrial Users identified under paragraph (f)(2)(i) of this section. This information shall be made available to the Regional Administrator or Director upon request.” ***This requires a POTW to characterize the IUs in the inventory of the service area.***
- iii. “Notify Industrial Users identified under paragraph (f)(2)(i) of this section, of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act. Within 30 days of approval pursuant to 40 CFR 403.8(f)(6), of a list of significant industrial users, notify each significant industrial user of its status as

such and of all requirements applicable to it as a result of such status.” *These procedures must include the notification of IUs of applicable Pretreatment Standards and other applicable requirements.*

40 CFR Part 40.3.8(f)(6) of the General Pretreatment Regulations state “The POTW shall prepare and maintain a list of its non-domestic or Industrial Users meeting the criteria in §403.3(v)(1). The list shall identify the criteria in §403.3(v)(1) applicable to each Industrial User and, where applicable, shall also indicate whether the POTW has made a determination pursuant to §403.3(v)(2) that such Industrial User should not be considered a Significant Industrial User. The initial list shall be submitted to the Approval Authority pursuant to §403.9 or as a non-substantial modification pursuant to §403.18(d). Modifications to the list shall be submitted to the Approval Authority pursuant to §403.12(i)(1).”

The General Pretreatment Regulations in §403.12(i)(1) require that programs maintain the IU inventory that contain information that provides the IU’s status under the Pretreatment program. §403.12(i)(1) states that a program shall maintain: “An updated list of the POTW’s Industrial Users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The POTW shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical Pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The POTW shall also list the Industrial Users that are subject only to local Requirements. The list must also identify Industrial Users subject to categorical Pretreatment Standards that are subject to reduced reporting requirements under paragraph (e)(3), and identify which Industrial Users are Non-Significant Categorical Industrial Users.”

The approved Pretreatment programs are required by the Pretreatment Regulations to understand their service area and outside contributing jurisdictions by developing and maintaining an inventory of IUs. In addition, the Pretreatment Regulations require a Pretreatment program to characterize the IUs listed on the inventory and notify the IU of their status under the Pretreatment program. For example, the following characterizations may apply to an IU, based on information received from questionnaires, drive-by or facility inspections:

- The IU is not characterized as significant, based on volume and characteristic of the discharged wastewater,
- The IU is characterized as significant and issued a permit,
- The IU is not characterized as significant but loadings need to be controlled using BMPs in a source control program,
- The IU is generating wastewaters that are significant but is characterized as a zero discharging facility.

The **Industrial Waste Inventory and Characterization** or industrial waste survey procedures are an important component to an effective Pretreatment program because this is a POTW’s first exposure to the IUs, allows the POTW to determine if an IU is significant,

notify the IU of its status under the Pretreatment regulations, and determine the appropriate type of control mechanisms for these facilities to protect the POTW and collection system.

### *7.2 Industrial User Identification and Characterization Procedure*

The City developed a Pretreatment standard operating procedure (SOP) that is intended to guide the Pretreatment Coordinator with finding new businesses that are in the City's service area and help to maintain/update the industrial user inventory. The SOP discusses collaborating/communicating with the internal City departments such as the business licensing, Fire Marshal's office, and Utilities to gather information used to determine which new businesses need an industrial waste survey form or an initial facility inspection. The procedure also discusses the use of industrial user screening form (a shortened version of the industrial user wastewater survey) to identify existing businesses that may need follow-up to determine if these contribute significant non-domestic pollutants. The following issues are identified in the SOP as needing additional information gathered in an industrial waste survey or an inspection:

- Anything that is addressed in the Prohibited Substances in the Ordinances.
- The discharge must be able to meet the local limits for heavy metals set in the Ordinances.
- A business that discharges 25,000 gallons or more a day of process wastewater is considered to be a significant industrial user.
- If the business is "Categorical" they would require a permit no matter how small of a generator they may be.
- The discharge needs to meet the limits set in the Ordinances for BOD, TSS, Oil/grease, Benzene and BTEX.

The City's procedure is adequate to meet the intent of 40 CFR 403.8(f)(2)(i-ii) to identify and classify IUs in the service area. The procedure describes the methods and tools used to compile the IU inventory and states that the existing commercial and industrial users are updated similar to compiling the inventory.

The City's procedure needs to be updated to include the requirement to notify Industrial Users of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act, as required in 40 CFR 403.8(f)(2)(iii). This notification should be contained in a follow up letter to the IUs that are significant or those facilities that are subject to control mechanisms such as BMPs instituted in a sector control program.

### *7.3 Industrial User Database of the City's Service Area*

The City has developed an IU inventory of its service area that needs to be updated and maintained. The IU inventory is a listing of IUs in the service area that is generated in the JobCal program that does not appear to be current. The listing provides the facility name, address, and a broad characterization of the IUs. 40 CFR 403.12(i)(1) of the Pretreatment Regulations require that Pretreatment programs maintain the IU inventory that contain information that provides the IU's status under the Pretreatment program. It appears that

the current IU inventory meets this characterization requirement.

Although the industrial waste survey procedure is adequate, based on a review of available IU survey and inspection records, it is apparent that the City has not invested resources in using the methods discussed in the procedure. The City is required to update and maintain the IU inventory based on available tools to the City such as the industrial waste survey, drive by inspections, facility inspections, etc. as identified in the City's procedure for the industrial user inventory.

In addition, the City is required to update and maintain the IU inventory to include any potential non-domestic sources in the Aspen Meadows service area. The City needs to develop a complete inventory of the dental offices in the service area to determine new and existing dental facilities subject to the Dental Amalgam Rule promulgated by the EPA on June 14, 2017.

The current IU inventory contains more than 525 industrial users in its service area. The inventory contains restaurants that are subject to the Oil and Grease sector control program based on BMPs. The City should evaluate its current industrial user inventory and determine which IUs or IU sectors are a priority, based on local concerns and prioritize these to ensure that these IUs or sectors are updated on a more frequent basis. For example, machine shops have the potential to add a metal finishing line or paint preparation phosphate spray process and can be subject to the Metal Finishing Categorical Pretreatment Standards. The City should ensure the machine shop's characterization/notification is based on current data more frequent than lesser priority IUs. This prioritization method of maintaining the IU inventory may decrease the number of IUs required to gather current data or provide focus on the IUs or IU sectors of concern. The City can also determine other IUs or IU sectors that may not need to be updated on a regular schedule based on the potential for these IUs to not change processes or not discharge pollutants of concern, based on the City's judgment.

The EPA recommends the City collaborate or cross train with the Fire departments within the service area to gather additional information from the Fire department's facility inspections. The Fire department personnel are typically in the IU's facilities throughout the service area and can notify the City if it observes spills, non-compliant chemical storage or other areas of concern to the Pretreatment program.

The EPA currently provides "Pretreatment 101" webinar training on a regular basis. Training for the "Industrial User Inventory and Characterization Procedures" was provided in September 2010 and is archived at the following website link:

<http://www.epa.gov/npdes/training>.

#### Corrective Action Items:

1. The City of Helena's procedure needs to be updated to include the requirement to notify Industrial Users of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act.

2. The City of Helena is required to update and maintain the IU inventory based on available tools to the City such as the industrial waste survey, drive by inspections, facility inspections, etc. as identified in the City's SOP for the industrial user inventory.
3. The City is required to update and maintain the IU inventory to include any potential non-domestic sources in the Aspen Meadows service area.
4. The City needs to develop a complete inventory of the dental offices in the service area to determine new and existing dental facilities subject to the Dental Amalgam Rule promulgated by the EPA on June 14, 2017.

## **8.0 Control Mechanism (Permit) Evaluation and Permit Specific Issues**

### *8.1 Permit Application Overview*

Section 6-14-14 of the municipal ordinance requires all significant industrial users to obtain an industrial wastewater discharge permit and submit an application:

“(A) significant industrial user shall obtain an industrial wastewater discharge permit.

(B) Existing industrial users shall apply for an industrial wastewater discharge permit within ninety (90) days after the effective date of this chapter and proposed new industrial users shall apply at least ninety (90) days prior to discharging into the POTW.

(C) The department will evaluate the data furnished by the applicant and may require additional information. Within ninety (90) days of receipt of a complete application, the department will determine whether an industrial wastewater discharge permit should be issued. The department may approve, conditionally approve, or deny the application.”

### *8.2 Statement of Basis Overview*

A statement of basis or fact sheet is a document that provides a justification of the permit conditions and limits based on a characterization of the IU and the applicable Pretreatment Standards and Requirements. The statement of basis should include an overview of the facility's production, process(es), wastewater generation/management, and discharge locations to adequately characterize the facility. The statement of basis should also identify the appropriate Federal, State, and Local Pretreatment Standards, based on the IU's characterization and should provide justification for permit conditions and requirements, such as pollutants of concern, monitoring/reporting frequencies, representative sampling types, notification requirements, slug discharge control, operation and maintenance requirements, etc. The statement of basis can also serve as a resident document to preserve institutional knowledge and continuity for new or different staff members.

The EPA reviewed two permits during the Pretreatment audit and one CIU permit included a statement of basis that provides characterization of the SIU, justification of the applicable Pretreatment Standards and Requirements based on the SIU characterization and a justification of the permit conditions.

### 8.3 Permit Template Overview

The General Pretreatment Regulations establish the permit conditions in 40 CFR Part 403.8(f)(1)(B)(1-6). The permit conditions contained in §403.8(f)(1)(B)(1-6) include the following:

1. Statement of duration (in no case more than five years);
2. Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
3. Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
4. Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored, sampling location, sampling frequency, and sample type, based on the applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
5. Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond applicable federal deadlines;
6. Requirements to control Slug Discharges, if determined by the POTW to be necessary.

The EPA updated the IU Permitting Guidance Manual, 833-R-12-0001A in September 2012 that supports the implementation of the permit conditions found in §403.8(f)(1)(B)(1-6) of the Pretreatment Regulations. The guidance manual is intended to provide both new and experienced permit writers conceptual support and specific examples to strengthen their permit development expertise. The guidance manual references technical guidance developed by the EPA regarding local limits, enforcing Pretreatment Standards and Requirements, controlling hauled waste, information regarding compliance inspections and sampling, and best management practices. The IU Permitting Guidance Manual can be found at the following: [https://www.epa.gov/sites/production/files/2015-10/documents/industrial\\_user\\_permitting\\_manual\\_full.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/industrial_user_permitting_manual_full.pdf).

The City developed a permit template that adequately implements the permit conditions found in §6-4-14(D)(1-14) of the municipal ordinance with the exception of language in the permit template allowing administrative extensions. The authority to provide administrative extensions in permit have not been incorporated into the City's municipal ordinance. As discussed during the audit, an administrative extension cannot allow the permit to exceed five years in duration because this would result in the City failing to implement the Pretreatment Regulations at 40 CFR Part 403.8(f)(1)(B)(1) which limits permit duration to five years at a maximum.

### 8.4 Specific Permit Record Findings

The City has identified two IUs in its service area as significant under the Pretreatment program, based on the IU's contribution of process wastewater to the POTW. One of these

permitted SIUs use manufacturing processes defined by the EPA as categorical and subject to the Metal Finishing Categorical Pretreatment Standards found in 40 CFR Part 433. Both SIUs are controlled by an individual permit. Findings from the EPA's review of the Pretreatment records, including the facility inspection report, statement of basis, permit, compliance evaluation, and enforcement records are listed below:

#### 8.4.1 Pretreatment Records Review

1. EPA evaluated the inspection reports conducted by the City for Decorative Industrial Plating and Montana Rail Link. As described in detail in §9.3, the inspection reports do not appear to be based on new and updated information about the facility and appear to be copy and pasted from the previous year.

#### 8.4.2 Decorative Industrial Plating (DIP)

1. The permit rationale for the facility provided an adequate description of the facility's process that exceeds the quality of information gathered in the inspection reports located in the Pretreatment records.
2. The City issued the DIP permit on October 1, 2016 with the following daily and monthly limits for Arsenic, Chromium III, Chrome VI, and the daily permit limits for Mercury, Molybdenum and Selenium do not have a defensible basis or justification. These permit limits are not incorporated in the City's local limits resolution nor are these categorical Metal Finishing Categorical Standards. The City is required to ensure permit limits are enforceable and is required to modify the permit to incorporate enforceable limits for Arsenic, Chromium III, Chromium VI, Mercury, Molybdenum, and Selenium.

Pollutant	Daily Maximum (mg/L)	Monthly Average (mg/L)
Arsenic	0.01	0.006
Chromium III	2.36	1.46
Chromium VI	0.41	0.25
Mercury	0.25	
Molybdenum	1.28	
Selenium	0.95	

3. The 2016 DIP permit did not include a Total Toxic Organics daily maximum permit limit of 2.13 mg/L, as required by the Metal Finishing Categorical Pretreatment Standards at 40 CFR 433.17(a). The City is required to modify the DIP permit to include the TTO daily maximum limit.
  - a. The City is required to modify the DIP permit to incorporate monitoring requirements for TTO. If monitoring is necessary to measure compliance with the TTO standard, the industrial discharger need analyze for only those pollutants which would reasonably be expected to be present. or alternatively, according to 40 CFR 433.12 (a) and (b):
    - i. In lieu of requiring monitoring for TTO, the City may allow DIP to make



the following certification statement: “Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation [or pretreatment standard] for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the permitting [or control] authority.” This statement is to be included in the periodic reports submitted by DIP.

- ii. In requesting the certification alternative, DIP shall submit a solvent management plan that specifies to the satisfaction of the City that the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for ensuring that toxic organics do not routinely spill or leak into the wastewater.
4. The DIP permit allows for grab sampling for compliance purposes. The grab sample at the facility does not appear to be representative of the 8-hour discharge from the facility. The permit rationale does not provide adequate justification regarding representative sampling techniques. The City is required to re-evaluate the sampling frequencies and types based on the discharge from DIP during a production day and modify the permit, if necessary.
5. The City is not performing independent pH samples as required in the permit. The Pretreatment records only include pH monitoring performed by the facility. The City is required to perform independent sampling for all pollutants of concern in the DIP permit.

#### 8.4.3 Montana Rail Link (MRL)

1. MRL is gathering non-reportable data from the final batch tank and submitting to the City for permission to discharge. MRL is not following up with sampling during discharge at the monitoring point. The data gathered from the final batch tank is not an actual discharge to the City’s sanitary sewer system and is not enforceable. The City is required to ensure that MRL is performing compliance sampling during an actual discharge to the City’s sanitary sewer system.
2. The 2016 facility inspection by the City required MRL to install a flow meter, however, there is no documentation in the permit records whether the flow meter was installed.
3. The following self-monitoring reports were not date-stamped; the EPA was unable to determine if the reports were received within the deadline due date. The City is required to date stamp all received compliance reports to document they were submitted by the permit’s deadline.
  - a. September 2016
  - b. October 2016
  - c. December 2016

- d. February 2017
  - e. March 2017
  - f. April 2017
4. The Montana Rail Link's self-monitoring report for the month of June 2016 was due on July 28, 2016, according to the permit. The compliance report was stamped received on August 9, 2016. There was not an enforcement response for this permit violation in the Pretreatment records. The City is required to provide an enforcement response for this permit violation.

Corrective Action Items:

1. The City developed a permit template that adequately implements the permit conditions found in §6-4-14(D)(1-14) of the municipal ordinance with the exception of language in the permit template allowing administrative extensions. The authority to provide administrative extensions in permit have not been incorporated into the City's municipal ordinance. The City of Helena is required to either incorporate the authority to administratively extend the permits or remove this language from the permit template.
2. The City of Helena is required to ensure the DIP permit limits are enforceable and is required to modify the permit to incorporate enforceable limits for Arsenic, Chromium III, Chromium VI, Mercury, Molybdenum, and Selenium.
3. The 2016 DIP permit did not include a Total Toxic Organics daily maximum permit limit of 2.13 mg/L, as required by the Metal Finishing Categorical Pretreatment Standards at 40 CFR 433.17(a). The City of Helena is required to modify the DIP permit to include the TTO daily maximum limit.
4. The City of Helena is required to modify the DIP permit to incorporate monitoring requirements for TTO or alternatively, solvent management plan and certification requirements found in 40 CFR 433.12 (a) and (b).
5. The City of Helena is required to re-evaluate the sampling frequencies and types based on the discharge from DIP during a production day and modify the permit, if necessary.
6. The City of Helena is required to perform independent sampling for all pollutants of concern in the DIP permit.
7. The City of Helena is required to ensure that MRL is performing compliance sampling during an actual discharge to the City's sanitary sewer system.
8. The City of Helena is required to date stamp all received compliance reports to document they were submitted by the permit's deadline.
9. The Montana Rail Link's self-monitoring report for the month of June 2016 was due on July 28, 2016, according to the permit. The compliance report was stamped received on August 9, 2016. There was not an enforcement response for this permit violation in the Pretreatment records. The City is required to provide an enforcement response for this permit violation.

## **9.0 Significant Industrial User Facility Inspections**

### *9.1 Regulatory Background*

The General Pretreatment Regulations at 40 Part CFR 403.8(f)(1)(v) states that the POTW shall have the legal authority to:

“Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users. Representatives of the POTW shall be authorized to enter any premises of any Industrial User in which a Discharge source or treatment system is located or in which records are required to be kept under §403.12(o) to assure compliance with Pretreatment Standards. Such authority shall be at least as extensive as the authority provided under section 308 of the Act;”

In addition, 40 CFR Part 403.8(f)(2)(v) of the Pretreatment Regulations require the POTW to inspect its SIUs at least once per year. 40 CFR Part 403.8(f)(2)(vii) establishes the standard of evidence collection during sampling or inspection activities:

“Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under §403.12, or indicated by analysis, inspection, and surveillance activities described in paragraph (f)(2)(v) of this section. Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions.”

Typically, an inspector is the only representative from the POTW that regularly appears at the IU’s facility and significantly represents the POTW’s role as a responsible public agency observing the actions and evaluating the performance of the regulated industry.

### *9.2 Right of Entry*

The City has established the authority for right of entry in §6-4-15(F) of the municipal ordinance. The language in this section states the following:

The city has the authority to enter and inspect, at least once a year, the facilities of all industrial users. The city's authorized personnel have the right of entry to, upon or through any premises in which an effluent source is located or in which records required to be maintained by the permittee are located and, at all reasonable times, have access to and copy any records, inspect any monitoring equipment or methods required of the permittee, and sample any effluents which the owner or operator of such source is generating.

The language in the City’s Municipal Ordinance meet §403.8(f)(1)(v) of the Pretreatment Regulations which requires that the City establish the legal authority to enter any premises of any Industrial User to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users.

The EPA recommends the City directly state its authority to use digital photos as evidence gathering in the municipal ordinance.

### *9.3 Facility Inspection Records – Background*

40 CFR Part 403.8(f)(2)(vii) of the General Pretreatment Regulations require the City to meet the criterion for evidence collection “with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions”. This is performed during facility inspections by adequate documentation in the inspection report of the observations, surveillance, inspections, sampling taking and analysis gathered during facility inspections. A complete and well-developed inspection report that provides a current characterization of the facility will benefit the City’s Pretreatment program for programmatic decisions such as categorical determinations, slug discharge/spill potential, changes at the facility that may affect the current permit conditions, sampling frequencies, etc.

The inspection report generated from the facility inspections should accomplish the following three objectives: 1) organizes and coordinates all information in a comprehensive, usable manner for use by the POTW’s compliance personnel; 2) identifies areas that may require follow up activity; and 3) provides significant background information on the facility that can be reviewed prior to conducting subsequent inspections at the facility. The quality of this documentation will, to a large degree, determine how effective these follow up activities will be at the facility. The information in the inspection report must be presented in a clear, concise, and well-organized manner.

It is important for Pretreatment programs to capture the following information during facility inspections to characterize the facility and document facility changes to ensure the SIU’s permit addresses current conditions:

- Chemical storage areas, including potential spill concerns during chemical receiving and transfer/handling,
- Process tanks or processing areas – detailed descriptions of the process including tank contents, capacities,
- Wastestream generation from the process areas and disposal/discharge practices – frequency of discharge rinse water tanks, are spent chemical solutions tanks discharged to the POTW or hauled off site? Proximity to floor/trench drains, slug discharge control and spill containment measures, etc.
- Wastestream management (treatment, recycling, hauling off site, evaporation, etc.)
- Waste treatment system,
- Wastestream or hazardous waste storage areas, including potential spill concerns,
- Discharge monitoring points, evaluation if the monitoring point and equipment are functional and incorporate all regulated wastewater discharged to the POTW.
  - Evaluation of the sampling/monitoring protocols to determine if these are appropriate to provide representative data of the wastewaters regulated by the permit.
- For example, detailed descriptions of tank contents, capacities, generated wastestreams, plumbing, and management of the wastestreams will benefit the POTW to establish the baseline for the year and to determine if any changes will

impact the permit conditions/limits or associated documents such as the slug discharge control plan, spill plan, treatment system operation manual or sampling protocol.

- A facility inspection of a permitted SIU should include a review of relevant records used to support compliance with the permit conditions and that may not be reported in the self-monitoring compliance reports such as pH and flow continuous monitoring records, tank change out logs, analytical reports, waste manifests, operation and maintenance logs, etc.

During the Pretreatment audit, the EPA provided office and field training and outreach regarding inspection procedures to the City. The EPA performs facility inspections by gathering verbal information in an opening conference, then performing a walkthrough to visually confirm the information gathered during the opening interview. The EPA structures its information gathering by following the raw materials/chemical supply through the unit operations and ultimately to the finished product or service. A closing conference is performed to gather follow up information, review records, and to provide preliminary conclusions to the facility.

#### *9.4 Evaluation of the City Inspection Reports/Records*

The EPA evaluated the inspection reports and other records related to the facility inspections. As stated previously, the City is not updating or maintaining its IU inventory and is required to ensure the IU inventory is based on current data and information.

The SIU inspection reports are not based on current data gathered at the facility. Based on the EPA's review of past year's records, the inspection reports are copied and pasted from the previous year dating back at least three years. This is not an inspection report that will provide updated information regarding the facility's process changes that could result in slug discharge control, including spills, changes in wastewater characteristics or discharge practices. The City is required to include more specific and current information regarding the facility's processes and waste treatment methods in the annual inspection report. For example, the inspection reports do not contain an evaluation of the facility's potential for slug discharge control or information regarding the facility's discharge practices to ensure the compliance sampling outlined in the permit is based on representative sampling.

In addition, the EPA recommends the City take digital photos of relevant areas of the facility such as chemical storage areas, unit operations, process(es) lines, wastewater generations, waste treatment, etc. to supplement the narrative information included in the inspection report and to document changes in operation. The Digital Camera Guidance for EPA Civil Inspections and Investigations - EPA-305-F-06-002 published by the EPA in July 2006 is included as an enclosure with the audit report.

#### *9.5 Notification of Applicable Pretreatment Status*

40 CFR Part 403.8(f)(2)(iii) of the General Pretreatment Regulations require the City to notify Industrial Users of applicable Pretreatment Standards and Requirements. The City needs to include notification of the applicable Pretreatment Standards for the SIU and should provide a follow up letter to the SIU or a copy of the inspection report that provides

a summary of the inspection, applicable findings/observations, and the current status under the Pretreatment program.

The EPA recommends the City include language in an inspection follow up letter that requires the facility to notify the City of any significant process changes that could impact its current status under the Pretreatment program. This notification requirement is required in 40 CFR Part 403.12(j) of the Pretreatment Regulations. The inclusion of this language in the inspection follow up letter will provide additional outreach and communication to the inspected facility regarding this notification requirement.

## *9.6 Facility Inspections*

One permitted SIU was inspected during the audit by the EPA and City personnel. The review of the Pretreatment records and interviews with the facility contacts during the EPA inspection indicate that the City is knowledgeable of the facility. In addition, there appeared to be a professional and good working relationship between the City and the SIUs.

An overview summary of the facility inspection is provided below. In addition, areas of concern during the facility inspections, if applicable, are provided after the facility description.

### *9.6.1 Decorative Industrial Plating*

#### *Process Description –*

Decorative Industrial Plating is a metal finishing job shop that plates raw materials according to customer specifications. The facility is located at 2531 North Dodge Avenue, Helena, MT 59601 and was represented by Mr. Paul Graham-owner.

The facility uses nitric, hydrochloric, sulfuric, and muriatic acids stored in 15-gallon carboy containers. The material storage area also included one 50-lb bag of boric acid, 100-lb bags of chromic acid, nickel sulfate and nickel chloride, caustic soda bags, and 220 lbs of copper, and 200 lbs of nickel for the raw materials in its plating lines.

Received parts are staged in the plating shop. The parts that need stripping are put into the chrome strip 350-gal tank or 250-gallon heated paint strip tank. The heated tank evaporates its contents in about 9 months and is replenished with the used electrolytic cleaner solution from the 350-gallon cleaner tank.

The stripped parts are sandblasted or bead-blasted in cabinets dedicated to each process. The spent sand or beads from these cabinets are disposed of at a landfill and replaced with fresh sand or beads. The parts that are blasted are polished with a polishing belt machine.

After polishing, the parts are cleaned in a 350-gallon electrolytic cleaner tank followed by a 500-gallon rinse tank located in the middle of the plating process room. The electrolytic cleaner is the first unit operation for all plating activities.

The electrolytic cleaning rinse tank is supplied with fresh water for the production day and continuously overflows to the sanitary sewer. The rinse tank is continuously trickle overflowed to the sanitary sewer at the request of the City. The rinse tank was overflowing during the inspection even though there were no parts being cleaned. The facility discharges an estimated 3,000 to 4,000 gallons/month from this rinse tank to monitoring point 001. Based on observations from the inspection, this is the only process wastewater discharge from the plating unit operations.

The plating room is located in the middle of the facility in a rectangular shape and contains the plating lines described below:

- Copper plating – 950-gallon, parts are electroplated for about 1 to 2 hours
  - Plating is followed by two rinse tanks that are dead and are counter current flowed. The spent solution in the dirty counter current rinse tank is used as makeup water for the previous tank in the copper plating line. Process wastewater from this line is never discharged to the sanitary sewer., according to Mr. Graham.
- Copper strike (cyanide copper) – heated 950-gallon tank
  - The copper strike tank is followed by three rinse tanks that are dead and are counter current flowed. The spent solution in the dirty counter current rinse tank is used as makeup water for the copper plating line. Process wastewater from this line is never discharged to the sanitary sewer, according to Mr. Graham.
- Chrome plating – heated 950-gallon tank
  - two rinse tanks that are dead and are counter current flowed. The spent solution in the dirty counter current rinse tank is used as makeup water for the copper plating line. Process wastewater from this line is never discharged to the sanitary sewer, according to Mr. Graham.
- Nickel plating – heated 950-gallon tank
  - two rinse tanks that are dead and are counter current flowed. The spent solution in the dirty counter current rinse tank is used as makeup water for the copper plating line. Process wastewater from this line is never discharged to the sanitary sewer., according to Mr. Graham.
- Nickel Strike (cyanide nickel) – small stainless tank
- Brass plating – 950-gallon tank
  - One 55-gallon rinse tank, used as makeup water for the bright brass plating tank
- Gold plating – cold room, 12 to 15 gallon tank
- Zinc plating – used on aluminum parts,
  - Two drums - phosphoric acid
  - One drum – zincate

Process wastewater from the electrolytic rinse tank is discharged through monitoring point 001, which is a 4-inch PVC pipe located below grade in the back room of the facility. The City performed a grab sampling event for the permit limited parameters during the inspection. The facility was not performing parts cleaning during the sampling event and it does not appear that the City's sampling event is representative of the production day.

*Areas of concern –*

1. Decorative Industrial Plating discharges from the electrolytic cleaner an average of 8 hours per day. The City samples the facility using a grab sampling technique that is not representative of the production day. The City is required to evaluate its sampling protocol at DIP to ensure the samples are representative of an actual production day. It is recommended the sampling events be conducted while the production lines are in operation, not during lapses in production.

Corrective Action Items:

1. The City of Helena is required to ensure the facility inspection reports are developed using specific and current information regarding the facility's processes and waste treatment methods.
2. Decorative Industrial Plating discharges from the electrolytic cleaner an average of 8 hours per day. The City of Helena samples the facility using a grab sampling technique that is not representative of the production day. The City of Helena is required to evaluate its sampling protocol at Decorative Industrial Plating to ensure the samples are representative of an actual production day. It is recommended the sampling events be conducted while the production lines are in operation, not during lapses in production.
3. Decorative Industrial Plating has an organized binder with the SDS sheets of its chemicals used in process. The City is required to evaluate the chemicals to determine if the facility uses total toxic organics found in 40 CFR 433 and address the management of these chemicals through permit limits or through a toxic organic management plan.

## **10.0 Control Authority Compliance Monitoring**

### *10.1 Regulatory Background*

40 CFR Part 403.8(f)(1)(v) of the General Pretreatment Regulations requires the POTW to have the legal authority to: "Carry out all inspection, surveillance, and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and requirements." Further, 40 CFR Part 403.8(f)(2)(v) require a POTW to "Randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities in order to identify, independent of information supplied by Industrial Users, occasional and



continuing noncompliance with Pretreatment Standards. Inspect and sample the effluent from each Significant Industrial User at least once a year.”

The standard to which POTWs are held for purposes of evidence collection during a control authority monitoring event is outlined in 40 CFR Part 403.8(f)(2)(vii): “Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence which is admissible in enforcement proceedings or judicial actions.” In addition, a POTW is required to ensure these control authority monitoring events are based on representative conditions at the monitoring point to ensure that these sampling events are legally-defensible and are of the same quality as required for self-monitoring events. 40 CFR Part 403.12(g)(3) of the General Pretreatment Regulations require “The reports ...must be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, which data are representative of conditions occurring during the reporting period.”

An enforceable sample must be representative of the nature and character of the discharges during the reporting period and needs to be nearly identical in composition to that in the larger volume of wastewater being discharged. A POTW is required to implement a Control Authority monitoring program that meets the compliance monitoring requirements of the General Pretreatment Regulations and provides representative data for compliance determinations and that would be legally-defensible in court, if such an enforcement action is taken by the POTW. In addition, representative and legally-defensible data helps the POTW support other program objectives such as local limits evaluation and permit development or reissuance.

### *10.2 Sampling Plan and Protocols*

As required in 40 CFR Part 403.8(f)(2), the POTW shall “develop and implement procedures to ensure compliance with the requirements of a Pretreatment Program.” Further, 40 CFR Part 403.8(f)(2)(v) states “Randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities in order to identify, independent of information supplied by Industrial Users, occasional and continuing noncompliance with Pretreatment Standards. Inspect and sample the effluent from each Significant Industrial User at least once a year.”

The development and implementation of a sampling plan or procedures ensures the POTW is appropriately and consistently performing sampling or monitoring events that provide enforceable data that is representative of the discharge conditions at the facility. The sampling plan should include the following:

- purpose and objective of the sampling program,
- specific sampling protocols at each facility sampling location to ensure representative sampling, and
- appropriate Quality Assurance (QA)/Quality Control (QC) procedures to ensure legally-defensible data.

### 10.2.1 Site-Specific Sampling Protocols

The sampling protocols must include specific procedures used at each facility to ensure adequate and representative sampling protocols. The development of the sampling plan will ensure the sampling events are performed in accordance with appropriate standards and procedures and produce quality data that is legally-defensible.

At a minimum, the specific sampling protocols at each sampling location should include the following:

- Sampling Locations – should include all outfalls included in the SIU’s permit, including the use of digital photos for each outfall.
- Type of Sample – the POTW is required to ensure the sampling event is representative of the SIU’s discharge, as required by §403.12(g)(3). The type of sample will be dependent on the parameter to be sampled and discharge characteristics. The type of sample could include specifications for use of automatic samplers (including programming to provide representative sampling) or manual sampling techniques.
- Type of Flow Measurement – if applicable
- Parameters for Analysis – based on the SIU’s permit
- Sample Volume
- Type of Sample Containers
- Sample Preservation Techniques
- Sample Identification and Chain of Custody Procedures
- QA-QC Procedures

### 10.2.2 Quality Assurance/Quality Control (QA/QC)

QA and QC are tools which are necessary in a sampling program to maintain a level of quality, such as legally-defensible data, in the measurement, documentation, and interpretation of sampling data. The QA-QC procedures are used to obtain data that are both precise (degree of closeness between two or more samples) and accurate (degree of closeness between the results obtained from the sample analysis and the true value that should have been obtained). Proper implementation of QA-QC procedures will result in an increase in the POTW’s confidence in the validity of the reported analytical data.

The QA-QC procedures used to ensure data collected is valid and legally-defensible include, but are not limited to the following:

- equipment maintenance/calibration,
- proper sampling bottles, proper sampling techniques that are adequate and representative of the discharge from the facility,
- ensuring sampling personnel are adequately trained, and
- field blanks, equipment blanks, method blanks, standards, blind duplicates.

### *10.3 The EPA Evaluation of the City's Control Authority Monitoring*

#### 10.3.1 SOPs

The City has developed sampling protocols for the SIUs in its service area. The sampling protocols for DIP and MRL provide descriptions regarding the sampling location, pollutants of concern, and sampling methods. However, as discussed in previous sections of the audit report, it does not appear that the sampling is representative at the SIUs based on the following:

- Based on information gathered during the EPA's inspection of DIP, the facility discharges over eight hours in the production day. The sampling protocol requires a grab sample of the pollutants of concern; this is not representative of the production day.
- Based on the EPA's review of the MRL Pretreatment records, MRL is allowed to take a sample of wastewater that is not discharged, resulting in non-enforceable data. The City needs to ensure the data gathered from MRL is reportable and enforceable.
- The City also needs to update the sampling protocols to include QA/QC to ensure adequate and defensible data, this includes use of field blanks, submitting blind standards, and duplicates to ensure the sampling techniques are consistent and to provide a confirmation of the laboratory analytical methods. In addition, QA/QC includes maintenance, cleaning and calibration of the sampling/monitoring equipment and associated equipment blanks.

The City is required to develop sampling procedures that provides documentation regarding representative sampling based on appropriate sampling procedures and techniques. The sampling plan needs to include adequate QA/QC procedures during sampling events to ensure the analytical data is valid and legally defensible.

#### 10.3.2 City's Control Authority Monitoring

Based on the EPA's review of the Pretreatment records, the City has met the control authority monitoring frequency of 1/year monitoring, as required in 40 CFR Part 403.8(f)(2)(v). However, it does not appear that the sampling protocols are representative of the production day's discharge to the sanitary sewer. In addition, the City needs to ensure it samples for all pollutants of concern at the SIUs.

#### Corrective Action Items:

1. The City of Helena is required to develop sampling procedures that provides documentation regarding representative sampling based on appropriate sampling procedures and techniques. The sampling plan needs to include adequate QA/QC procedures during sampling events to ensure the analytical data is valid and legally defensible.

## 11.0 Enforcement

### 11.1 Regulatory Background

The EPA establishes the regulatory requirement to develop and implement an Enforcement Response Plan (ERP) in 40 CFR 403.8(f)(5)(i-iv) of the General Pretreatment Regulations. The ERP regulations at 40 CFR 403.8(f)(5) establish a framework for POTWs to formalize procedures for investigating and responding to instances of IU noncompliance. The regulations state:

“The POTW shall develop and implement an enforcement response plan. This plan shall contain detailed procedures indicating how a POTW will investigate and respond to instances of industrial user noncompliance. The plan shall, at a minimum:

- (i) Describe how the POTW will investigate instances of noncompliance;
- (ii) Describe the types of escalating enforcement responses the POTW will take in response to all anticipated types of industrial user violations and the time periods within which responses will take place;
- (iii) Identify (by title) the official(s) responsible for each type of response;
- (iv) Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards...”

The development and implementation of an ERP is an important component of an effective Pretreatment Program. Although the EPA believes that a successful Pretreatment program should provide outreach to facilities in the service area regarding the applicability of the Pretreatment Standards and compliance with these standards, in many situations, enforcement is the necessary driving force that makes the Pretreatment program functional.

The purpose of developing and following an approved ERP is to ensure that POTWs enforce against IUs objectively, consistently, and equitably and thereby minimize any potential outside pressures to overlook potential violations. A well-developed ERP should help the POTW decide what resources are needed to enforce the Pretreatment Standards/Requirements and assist in dealing with industrial user violations. In addition, the ERP will provide notice to the industrial users regarding the POTW's responsibility to respond to violations of Pretreatment Standards/Requirements. The ERP should provide that similar violations of the Pretreatment Standards/Requirements will be responded to consistently, depending on magnitude and pattern of these violations.

### 11.2 Enforcement Response Plan

The EPA evaluated the City's enforcement authority and remedies in its municipal ordinance found in §§6-4-19 through 6-4-23. The City has established the following criteria required by the Pretreatment Regulations:

1. Civil/Criminal penalties are established in §§6-4-21 and 6-4-22
2. Injunctive Relief provisions established in §6-4-23
3. Notice of Violation provisions established §6-4-20(B)

4. Suspensions of Service and permit termination provisions in §§6-4-20(A) and 6-4-20(D)

The City should evaluate its legal authority to provide the following enforcement authority to its ordinance:

5. Enforcement Response Plan referenced in the municipal ordinance
6. Immediately halt actual/threatened discharge provisions
7. Administrative Order authority
8. Consent Order authority
9. Cease and Desist Order authority
10. Administrative Penalty Authority

The enforcement remedies are implemented in City's Enforcement Response Plan (ERP). The City's ERP describes staffing, resources, and procedures used to investigate and determine the SIU's and IU's compliance with Pretreatment Standards and Requirements. In addition, the ERP provides enforcement actions, including escalating actions, in response to non-compliance. Based on the EPA's evaluation, the City's ERP adequately implements the enforcement remedies in its municipal ordinance.

### *11.3 Compliance Evaluation*

The City manually evaluates the submitted compliance reports, notifications, and other reports for compliance. The City uses a compliance tracking spreadsheet to help with the manual compliance evaluation as a guide to determine appropriate enforcement actions as follow up to the non-compliance.

### *11.4 SNC Calculations and Public Participation*

40 CFR 403.8(f)(2)(viii) of the General Pretreatment Regulations require a POTW to comply with the public participation requirements in the enforcement of National Pretreatment Standards. These procedures shall include provision for at least annual public notification in a newspaper of general circulation that provides meaningful public notice within the jurisdictions served by the POTW of Industrial Users which, at any time during the previous 12 months, were in significant noncompliance (SNC) with applicable Pretreatment requirements. The SNC determinations are both calculation of numeric Pretreatment Standards, as listed in 40 CFR 403.8(f)(2)(viii)(A-D) and determination of violations of the narrative Pretreatment Standards, as listed in 40 CFR 403.8(f)(2)(viii)(E-H).

Based on information gathered during the interview component of the audit, it appears the City performs SNC or longer term compliance as necessary, based on permit numeric and narrative violations. The facilities in SNC are published annually as required in the Pretreatment Regulations and §6-4-6(B) of the City's municipal ordinance, however, the EPA did not find records in the Pretreatment files that document the SNC calculations of numeric criteria and determinations of narrative criteria found in §6-4-19(A-H) of the City's municipal ordinance. The EPA recommends the City update its current SNC procedure to describe the City's procedures for calculating SNC based on the numeric

criteria and determination of the narrative criteria found in §6-4-19(A-H) of the City's municipal ordinance. The update should also include the documentation of these procedures in the permit records.

Corrective Action Items:

1. None Identified

## **12.0 Trucked and Hauled Waste**

### *12.1 Legal Authority*

The City has adopted the Federal specific discharge prohibition for trucked and hauled waste found in 40 CFR 403.5(b)(8) of the General Pretreatment Regulations and incorporated by the City in §6-4-5(C)(14) of the municipal ordinance:

“Any trucked or hauled pollutants, except as permitted by this chapter.”

The City has also adopted requirements for the trucked/hauled waste in 6-4-18 of the municipal ordinance:

- A. Septic tank waste may be introduced into the POTW only at locations and times designated by the department. Septic tank waste may not violate this chapter or any other requirements established by the city. The department may require septic tank waste haulers to obtain individual wastewater discharge permits.
- B. Industrial waste may not be discharged into the POTW unless an individual wastewater permit is obtained from the department. The discharge of hauled industrial waste is subject to all other requirements of this chapter.
- C. Industrial waste haulers must provide a waste tracking form for every load. This form must include, at a minimum, the name and address of the industrial waste hauler, permit number, truck identification, names and addresses of sources of waste, and volume and characteristics of waste. The form shall identify the type of industry, known or suspected constituents, and whether any wastes are RCRA hazardous wastes.

The City has nine trucked/hauled waste companies that deliver domestic waste to the POTW. The POTW can receive up to 20 loads/day. These companies are not permitted but are required to only discharge domestic waste with manifest documentation. The companies are issued a Best Management Practices agreement which provides requirements that they must comply with, including an annual license from the State of Montana.

### *12.2 Trucked and Hauled Waste Disposal Location and Control Mechanisms*

The City's designated disposal location for trucked and hauled pollutants is located at the POTW (see Figure 2). The disposal site is accessible to the trucked/hauled waste companies 24 hours a day. The individual companies are issued a specific code to open up

the magnetic lock and allow discharge to the headworks of the POTW. The companies are required to submit the manifests for the load and are charged by the capacity of the truck. A camera is located within the septic disposal site. The City does not currently routinely sample the septic loads.

The City's trucked and hauled waste program serves a great need for the local community and appears to be well-run program. The septic disposal site is under adequate control with the camera and requirement to enter in the code to discharge. It appears that the companies are tracked and billed adequately by the City.



**Figure 4 – Septic Hauled Waste Disposal Site**



**Figure 5 – Septic Hauled Waste Disposal Site**

### *12.3 RV disposal Locations*

The EPA did not investigate the RV disposal sites in the City’s service area but recommends the City evaluate and ensure appropriate control the RV disposal sites to ensure only RV waste is discharged at these locations and there are not illicit discharges that may impact the POTW.

#### Corrective Action Items:

1. None identified.

## **13.0 Best Management Practices – Sector Control Programs**

### *13.1 Regulatory Background*

Best Management Practices (BMP) are defined in 403.3(e) as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in §403.5(a)(1) ***[General Prohibitions]*** and (b) ***[Specific Prohibitions]***. ***[Emphasis added]*** BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

40 CFR 403.5(c)(4) states that “POTWs may develop Best Management Practices (BMPs) to implement paragraphs (c)(1) ***[develop limits to implement the general/specific prohibitions]*** and (c)(2) ***[develop and enforce specific effluent limits for industrial users that contribute pollutants that may result in Interference and Pass-Through]*** of this section. ***[Emphasis added]*** Such BMPs shall be considered local limits and Pretreatment Standards for the purposes of this part and section 307(d) of the Act.” The regulations



establish that BMPs are enforceable Pretreatment Standards.

### *13.2 Authority in Municipal Ordinance*

The City has established the minimum BMP elements in its municipal ordinance, with the exception of establishing BMPs as enforceable local limits and Pretreatment Standards, as discussed in § 4.0 of this audit report. BMPS are defined in §6-4-4, established as a permit condition in §6-4-14(D)(1) and an SNC criterion in §6-4-19(H).

Section 6-4-10 of the municipal ordinance establishes the requirements for sand and grease traps in the service area.

“No person operating a filling station, garage, or similar place having wash or grease racks shall discharge to the POTW unless such place is provided with a sand and grease trap of a size and construction as required by the current edition of the uniform plumbing code or plumbing regulations in effect at the time. No person operating a restaurant or food preparation establishment that discharges wastewater containing greater than one hundred milligrams per liter (100 mg/l) of oil and grease or that has a recurring problem with grease buildup or blockage of wastewater lines shall fail to install an adequate grease trap. All sand and grease traps shall be properly maintained and serviced at the owner's expense. Records of maintenance and service shall be made available to the city upon request by the department.”

The sand and grease trap program is based on BMPs and the City performs visual inspections of restaurants to ensure they are properly maintaining their interceptors. The City also developed grease pamphlets to provide outreach to the facilities subject to the sand and grease program.

### *13.3 Dental Amalgam BMP Sector Control Program*

The Dental Amalgam Rule, found in 40 CFR Part 441 was promulgated as a final rule with new source dental facilities required to be in compliance with the Pretreatment Standards as of July 14, 2017 and existing source dental facilities required to be in compliance as of June 14, 2020. Compliance with the rule equals installation of an ISO1143 amalgam separator or equivalent device and compliance with the following two best management practices:

- Prohibition on the use of oxidizing or chlorine-containing line cleaners, and
- Ensuring all amalgam process wastewater including chair-side traps, screens, vacuum pump filters, dental tools, cuspidors or collection devices are treated through the amalgam separator.

In addition, the new and existing dental facilities are required in 40 CFR Part 441.50 of the Final Dental Amalgam Rule to provide a report that characterizes the dental facility and certifies compliance. The new source dental facilities are required to be in compliance upon discharge and submit the one-time compliance report within 90 days of startup.

As described in §7.3 of this audit report, the City should ensure its industrial user inventory includes characterization of the dental facilities in its service area and which such facilities are subject to the Dental Amalgam Rule. In addition, the City should collaborate with its building permits and economic development departments to ensure the new source dental facilities are aware of their compliance/reporting requirements. The City should evaluate outreach and educational opportunities for the existing source dental facilities for compliance assistance. The EPA has contacted the Montana Dental Association and has provided outreach and education to the dental association to disseminate among its members throughout the state.

Corrective Action Items:

1. The City of Helena needs to ensure its IU inventory is complete for the dental offices in the service area and should evaluate outreach and educational opportunities for the existing source dental facilities for compliance assistance.